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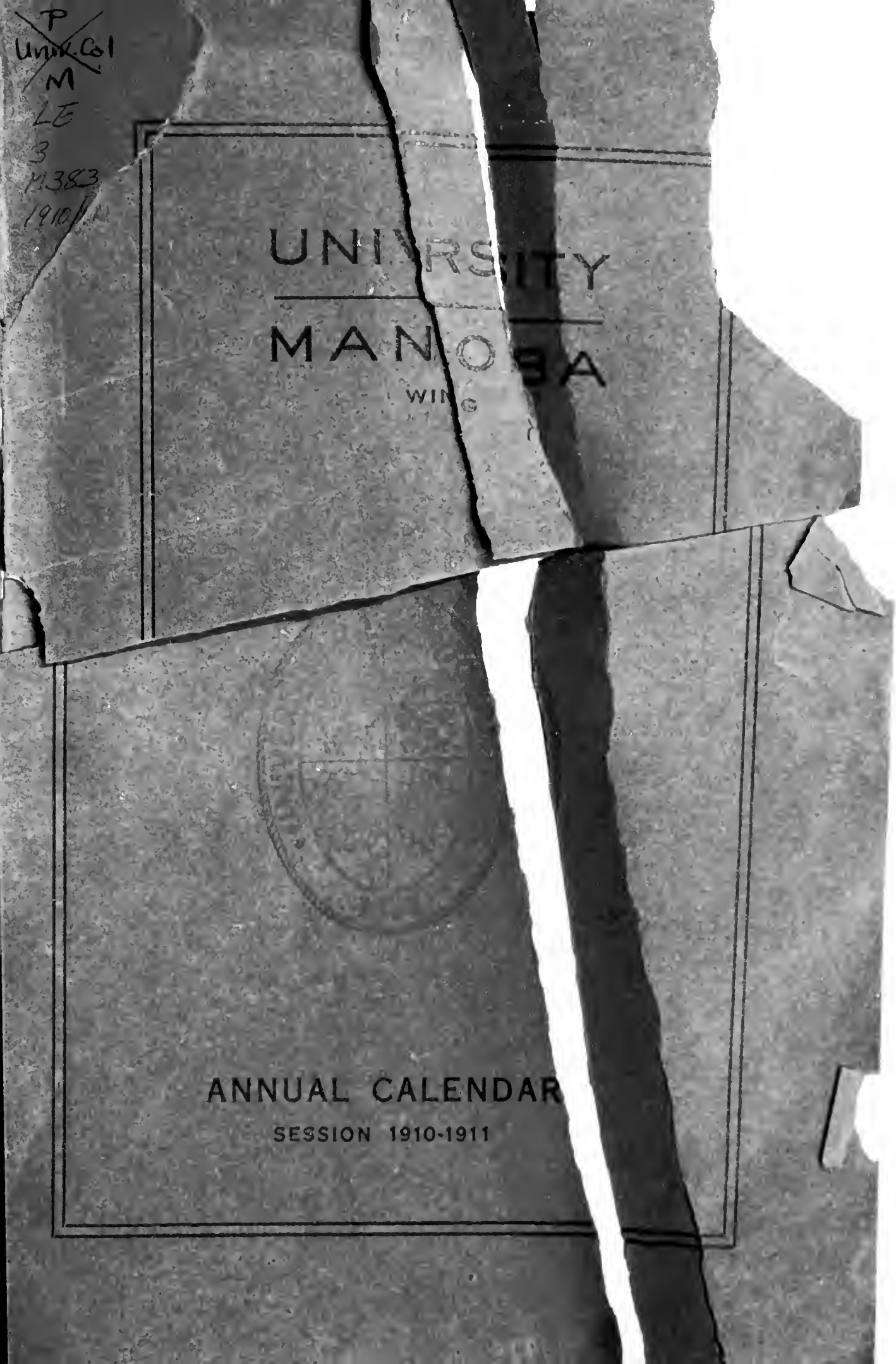
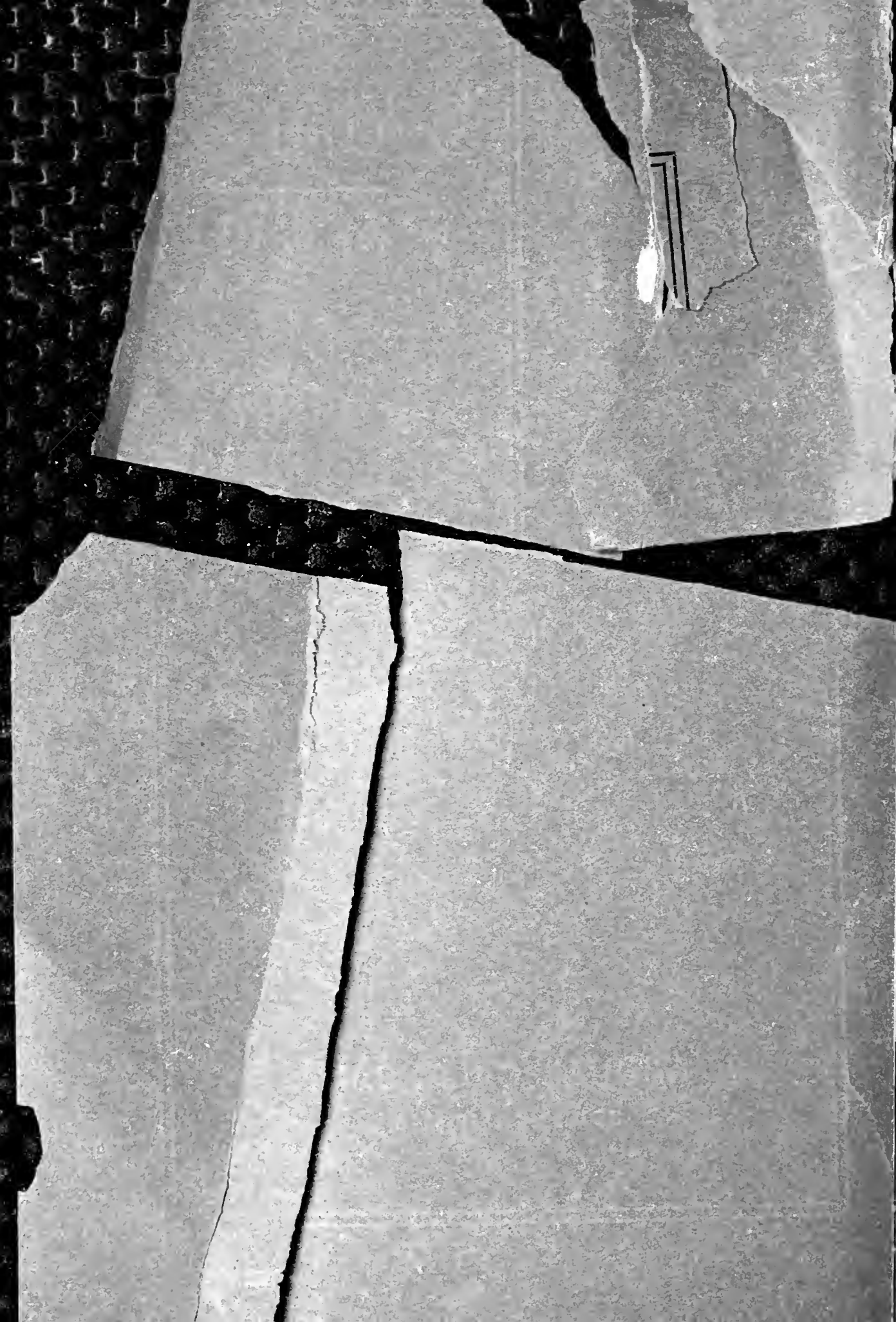
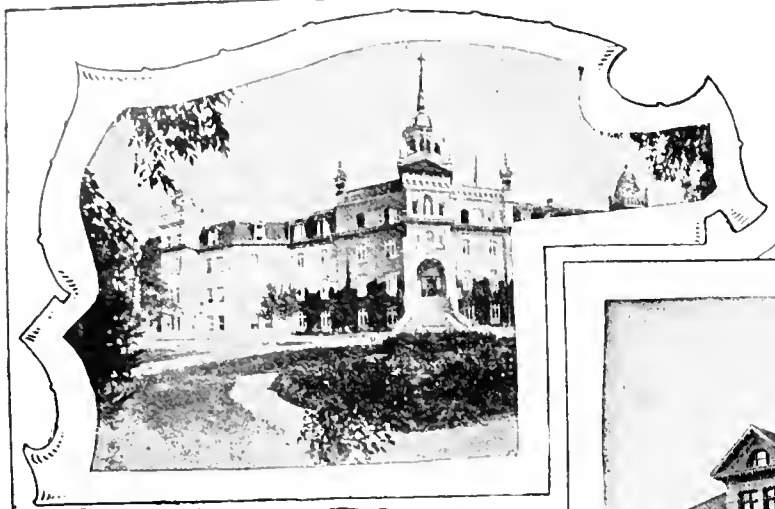


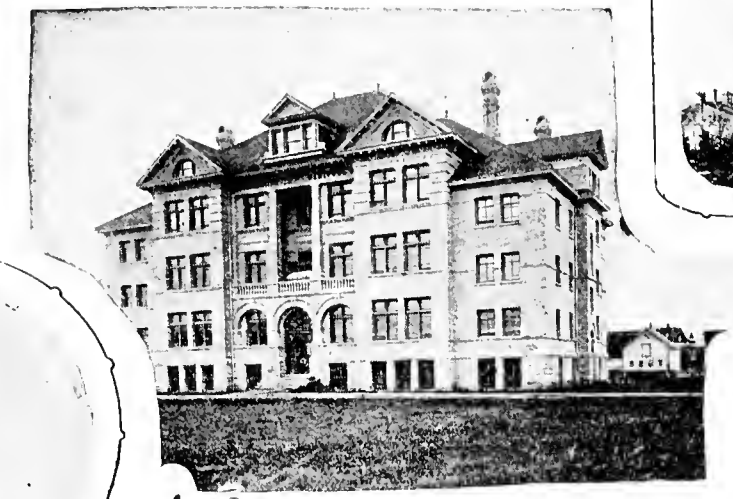
ANNUAL CALENDAR

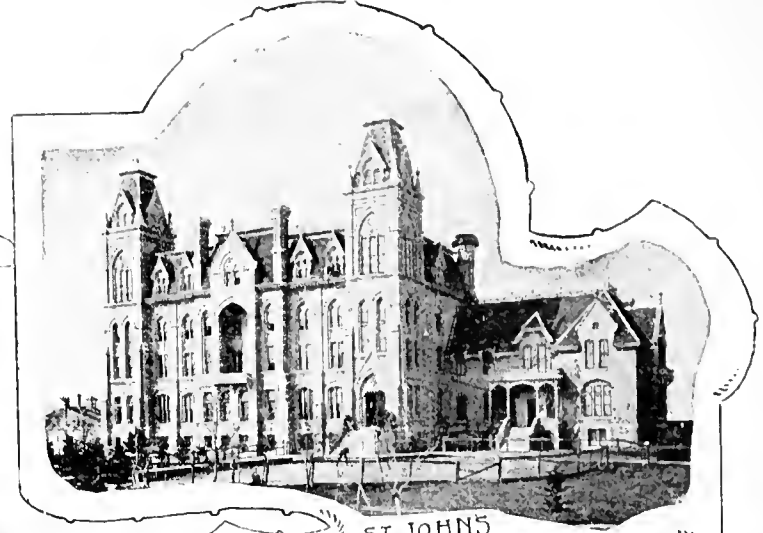
SESSION 1910-1911



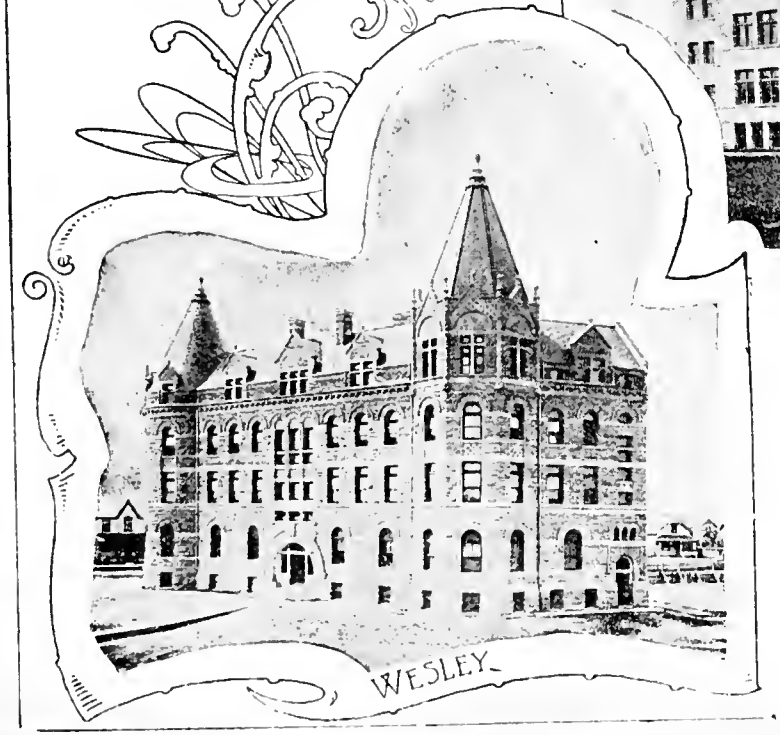


St Boniface





St. Johns



Wesley

The
University of Manitoba
and its
Affiliated Arts Colleges

Manitoba

CALENDAR

University of Manitoba

ERRATA

Page 74—Under Course in Mathematics, Third Year, Course 3: "Solid Analytical Geometry" should read "Geometry."

Page 74—Under Course in Mathematics, Third Year, Course 7: "Problems on 1, 2, 3, 4, 6" should read "Problems on 1, 2, 3, 4."

Page 74—Under Course in Mathematics, Fourth Year, Course 7: "page 107" should read "page 108."

Page 74—Under Course in Mathematics, Fourth Year, Course 9: "Problems on 1, 2, 3, 4, 5, 7" should read "Problems on 1, 2, 3, 4, 5."

Page 152—Under 11, Mathematics—Differential Equations: Add—"See Course 17, page 104." "Two hours per week, First Term" should read "Three hours per week, First Term."

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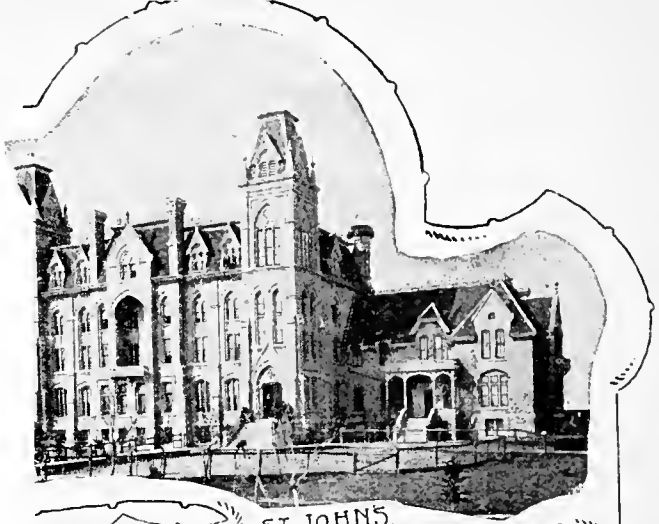
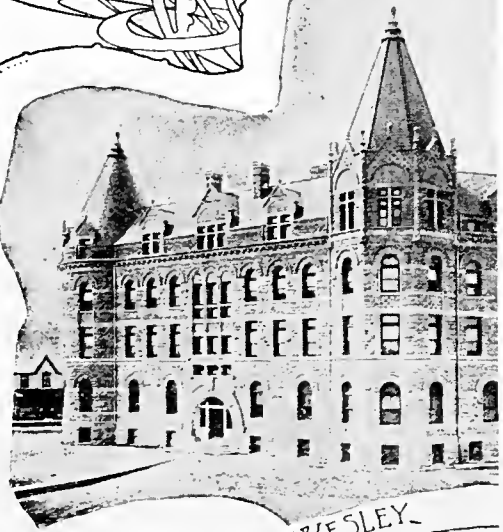
1910

St BONIFACE



St JOHNS.



WESLEY.

MANITOBA

CALENDAR

University of Manitoba

WINNIPEG

Incorporated by the Act of the Manitoba
Legislature, 1877

1910 - 1911

WINNIPEG:
Printed for the University by the Free Press Job Dept
1910

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All communications relating to examinations, curricula, university standing and instruction are to be addressed to the Registrar of the University, while all correspondence respecting college instruction, residence, etc., is to be addressed to the Registrar or Secretary of the College concerned.

REGISTRAR OF THE UNIVERSITY

W. J. SPENCE, B.A.

RECTOR OF ST. BONIFACE COLLEGE

REV. T. FILIATRAULT, S.J.

SECRETARY OF ST. JOHN'S COLLEGE

VERY REV. DEAN COOMBES, M.A.

REGISTRAR OF MANITOBA COLLEGE

F. W. CLARK, B.A.

REGISTRAR OF WESLEY COLLEGE

REV. A. STEWART, D.D.

REGISTRAR OF MANITOBA MEDICAL COLLEGE

E. S. POPHAM, M.A., M.D., C.M.

REGISTRAR OF THE COLLEGE OF PHARMACY

W. D. MACDOUGALL

SECRETARY OF THE UNIVERSITY FACULTY

E. P. FETHERSTONHAUGH, B.Sc.

REGISTRAR OF THE MANITOBA AGRICULTURAL COLLEGE

S. LARKIN, Esq.

ALMANAC, 1910-1911

1910—AUGUST

16—Tu Last day for receiving applications for the September Examinations.

SEPTEMBER

7—W Board of Studies meets at 4 p.m.
Opening of ballots and declaring result of election of ten Representatives of Convocation to Council.
15—Th Supplemental and Matriculation Examinations begin.
22—Th Registrar to be notified on or before this date of appointments of Representatives to the Council and to the Board of Studies.

OCTOBER

3—M University lectures begin.
5—W Board of Studies meets at 4 p.m.
6—Th University Council meets at 3 p.m. Election of Vice-Chancellor and of Representative to the Board of Studies. Appointment of Committees. Bursar's yearly statement.
14—Fr University field day.

NOVEMBER

2—W Board of Studies meets at 4 p.m.
29—Tu First Essay in Modern Language Course (English), to be written at the University Building, 2 p.m.

DECEMBER

7—W Board of Studies meets at 4 p.m.
8—Th University Council meets at 3 p.m. Election of Registrar.
14—W Payment of first moiety of Scholarships.
22—Th University Lectures close.

1911—JANUARY

3—Tu University Lectures begin.
4—W Board of Studies meets at 4 p.m.
7—S Essays of the First and Second Years to be written at the University Building, 2 p.m.
17—Tu Second Essay in the Modern Language Course (French), to be written at the University Building, 2 p.m.

FEBRUARY

1—W Board of Studies meets at 4 p.m.
9—Th University Council meets at 3 p.m. Appointment of Examiners.

MARCH

1—W Last day for receiving Theses for the M.A. degree. Board of Studies meets at 4 p.m.

7—Tu Third essay in the Modern Language Course (German), to be written at the University Building, 2 p.m.

9—Th Most Rev. R. Machray, D.D., LL.D., Archbishop of Rupert's Land, First Chancellor of the University, died, 1904.

18—S Last day for receiving applications for Examinations in Arts, Law, Medicine, Engineering and Agriculture.

APRIL

5—W Board of Studies meets at 4 p.m.

6—Th University Council meets at 3 p.m. University lectures close and University Examiners meet at 5 p.m.

17—M Examinations in Arts, Law, Medicine and Engineering begin

22—S Last day for receiving applications for the Matriculation Examinations, and for Special Examination of candidates for Travelling Scholarship.

N.B.—The Practical Examinations of the Faculty of Medicine will be held in April, at a date to be selected by the Board of Studies.

MAY

3—W Board of Studies meets at 4 p.m.

10—W Payment of second moiety of the following Scholarships : Matriculation, First Year in Law, First and Second Years in Arts and Engineering, First, Second and Third Years in Medicine.

11—Th University Council mets at 3 p.m., to consider Reports of Examinations.

12—Fr Conferring of Degrees at 3 p.m. Meeting of Convocation.

18—Th Payment of second moiety of the following Scholarships: Second Year in Law, Third Year in Arts and Engineering, Fourth Year in Medicine.

22—M Matriculation Examinations begin. Special Examination of candidates for Travelling Scholarship begins.

JUNE

7—W Board of Studies meets at 4 p.m.

8—Th University Council meets at 3 p.m.

THE UNIVERSITY OF MANITOBA

THE UNIVERSITY OF MANITOBA, established by Act of the Local Legislature in 1877, has the sole power of conferring Degrees in ARTS, LAW, MEDICINE, ENGINEERING and AGRICULTURE in the Province of Manitoba.

Degrees in DIVINITY may be granted by the various colleges affiliated with the University, provided that all candidates for the Degree of Bachelor of Divinity, not graduates of this or any other University, shall have passed a satisfactory examination on the subjects of the First and Second Years in Arts as prescribed by the University, Greek being compulsory. Such graduates in Divinity have in the University the same rights and privileges as other graduates.

The Government of the University is vested in the Chancellor, appointed by the Lieutenant-Governor-in-Council, and a Council of sixty-five members, composed of representatives from each of the affiliated Colleges, the members of Convocation, the College of Physicians and Surgeons of Manitoba, the Provincial Government, and the Faculty of the University.

COLLEGES AFFILIATED WITH THE UNIVERSITY

St. Boniface College, St. Boniface, in connection with the Roman Catholic Church. *Rector*—Rev. Father Filiatrault, S.J., St. Boniface College.

St. John's College, Winnipeg, in connection with the Church of England. *Warden*—Most Rev. Archbishop Matheson, D.D., D.C.L., Bishop's Court, St. Cross St. and Machray Ave.

Manitoba College, Winnipeg, in connection with the Presbyterian Church in Canada. *Principal*—Rev. Wm. Patrick, M.A., D.D., Manitoba Lodge, Ellice Ave.

Wesley College, Winnipeg, in connection with the Methodist Church in Canada. *Principal*—Rev. J. W. Sparling, M.A., D.D., 159 Kennedy St.

Manitoba Medical College, Winnipeg. Dean—H. H. Chown, B.A., M.D., C.M., 263 Broadway Ave.

Manitoba College of Pharmacy, Winnipeg. Principal—H. E. Bletcher, Phm.B., Afton Block, Ellice Ave.

Manitoba Agricultural College, Winnipeg. Principal—W. J. Black, B.S.A., Principal's Residence, Manitoba Agricultural College.

VISITOR

THE HON. SIR DANIEL HUNTER McMILLAN,
Lieutenant-Governor of Manitoba

CHANCELLOR

MOST REV. S. P. MATHESON, D.D., D.C.L., Archbishop of Rupert's Land

VICE-CHANCELLOR

THE HON. JOSEPH DUBUC, B.C.L., LL.D., formerly Chief Justice of Manitoba

HON. BURSAR

J. A. M. AIKINS, M.A., K.C.

REGISTRAR

W. J. SPENCE, B.A.

SOLICITOR

I. PITBLADO, M.A., LL.B.

GOVERNING BODY OF THE UNIVERSITY
1909-1910

Chairman

Most Rev. S. P. MATHESON, D.D., D.C.L., Archbishop of Rupert's Land.

Vice-Chairman

Hon. JOS. DUBUC, B.C.L., LL.D.

Representatives of St. Boniface College

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Rev. A. A. CHERRIER, Pt.
Rev. JOSEPH BLAIN, S.J.
The Hon. JOSEPH DUBUC, B.C.L., LL.D.
J. K. BARRETT, LL.D.
J. A. DEVINE, M.A., M.D., B.C.L.
JOSEPH BERNIER, M.A.

Representatives of St. John's College

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Ven. ARCHDEACON FORTIN, B.A., D.D.
Rev. CANON MURRAY, M.A.
Rev. CANON PHAIR, M.A.
Hon. T. MAYNE DALY, K.C.
J. A. MACHRAY, M.A., LL.B.
Rev. CANON TALBOT, M.A.

Representatives of Manitoba College

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Rev. GEORGE BRYCE, M.A., LL.D.
Rev. THOS. HART, M.A., D.D.
Rev. G. B. WILSON, M.A., LL.B., Ph.D.
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EDWARD BROWN, Esq.
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J. H. ASHDOWN, Esq.
W. F. OSBORNE, M.A.
R. T. RILEY, Esq.

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S. W. PROWSE, B.A., M.D., F.R.C.S.
E. S. POPHAM, M.A., M.D., C.M.

Representatives of the College of Physicians and Surgeons

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T. M. MILROY, M.D.
J. N. HUTCHISON, M.D.

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F. W. CLARK, B.A.
R. R. COCHRANE, B.A.
D. M. DUNCAN, M.A.
J. R. JONES, M.D.
E. LOFTUS, M.A., LL.B.
D. McINTYRE, M.A., Superintendent of Winnipeg Schools.
W. A. McINTYRE, B.A., LL.D., Principal of Normal School.
I. PITBLADO, M.A., LL.B.
J. HALPENNY, B.A., M.D., C.M.

Representatives of the Provincial Government

The Hon. the MINISTER OF EDUCATION (ex officio).
The Hon. Mr. JUSTICE RICHARDS
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E. D. MARTIN, Esq.
A. R. LEONARD, Esq.

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E. E. BRYDONE-JACK, B.A., C.E. (Renss).

Representatives of the Manitoba Agricultural College

W. J. BLACK, B.S.A., Principal.
G. A. SPROULE, B.A.
S. A. BEDFORD, Esq.
HUGH DYER, Esq.
WALTER JAMES, Esq.
J. PARENT, Esq.
ALEX. MORRISON, Esq.

CONVOCATION

Convocation consists of the Chancellor, the Vice-Chancellor, the members of the University Council, all University graduates in Manitoba registered in 1877, all graduates of the University and graduates in Theology from any of the colleges affiliated with the University.

The annual meeting of Convocation is held on the day of the conferring of degrees in May by the University, at the close of the public exercises, at which time nominations of candidates for representation on the Council are made.

THE BOARD OF STUDIES

The general superintendence of all examinations is entrusted to a Board called the Board of Studies, composed of members of the Council elected annually, as follows: Two by each of the affiliated Colleges in Arts, two by the Graduate Representatives, one by the College of Physicians and Surgeons of Manitoba, one by Manitoba Medical College, one by the Council, and two by the University Faculty.

It is the duty of the Board, also, to report to the Council, when they see fit, on the studies of the University, and other matters connected therewith, and generally to discharge all duties that may be assigned them by the Council.

Members of the Board, 1909-1910

Rev. Father Cherrier, *Chairman.*

W. J. Spence, *Secretary.*

Rev. Father Blain
Very Rev. Dean Coombes
Rev. Canon Murray
Rev. Dr. Bryce
Prof. F. W. Clark
Rev. Dr. Stewart
Prof. W. F. Osborne
Dr. H. H. Chown
Dr. T. M. Milroy
Dr. J. R. Jones
Mr. D. M. Duncan
Mr. Daniel McIntyre
Prof. R. R. Cochrane
Prof. A. H. R. Buller

STANDING COMMITTEES OF THE UNIVERSITY
1909-1910

University Land Board

Most Rev. Archbishop Matheson, *Chairman.*

Mr. J. A. M. Aikins
Rev. Dr. Sparling
Rev. Dr. Bryce
Mr. I. Pitblado
Mr. J. A. Machray

R. H. Shanks, *Secretary.*

Finance Committee

Rev. Dr. Sparling, *Chairman.*

Mr. J. A. M. Aikins
Prof. R. R. Cochrane
Mr. J. A. Machray
Mr. R. T. Riley
Dr. E. S. Popham
Dr. J. K. Barrett
Rev. Dr. Bryce
Rev. Dr. Patrick
Mr. E. Loftus

W. J. Spence, *Secretary.*

Rhodes Scholarship Committee

Hon. Joseph Dubuc, *Chairman.*

Hon. Mr. Justice Richards
Dr. H. H. Chown
Hon. Mr. Judge Myers
Mr. D. M. Duncan, *Secretary*

Building and Grounds Committee

Prof. E. E. Brydone-Jack, *Chairman.*

Rev. Dr. Stewart
Mr. Geo. H. Ross
Prof. R. R. Cochrane
Dr. J. Halpenny
Mr. R. Fletcher

Library Committee

Professor Buller, *Chairman.*

Rev. Canon Murray
Rev. Dr. Wilson
Prof. E. E. Brydone-Jack
Prof. F. W. Clark
Prof. W. F. Osborne
Dr. J. R. Jones

Librarian—Mrs. W. H. Thompson.

UNIVERSITY FACULTY.

FRANK ALLEN, M.A., Ph.D., F.R.S.C., *Chairman.*
EDWARD P. FETHERSTONHAUGH, B.Sc., A.M. Can. Soc. C.E., *Secretary.*

FRANK ALLEN, M.A., Ph.D., F.R.S.C.....*Professor of Physics*
GORDON BELL, B.A., M.D., C.M.....*Professor of Bacteriology and Pathology.*
A. H. REGINALD BULLER, B.Sc., Ph.D., D.Sc.....*Professor of Botany*
MATTHEW A. PARKER, B.Sc., F.C.S.....*Professor of Chemistry*
SWALE VINCENT, M.D., D.Sc., M.R.C.S., L.R.C.P.,.....*Professor of Physiology and Zoology*

ERNEST E. BRYDONE-JACK, B.A., C.E., M. Can. Soc. C.E., M. Am. Soc. C.E.....*Professor of Civil Engineering*
EDWARD P. FETHERSTONHAUGH, B.Sc., A.M. Can. Soc. C.E.....*Professor of Electrical Engineering*

ARCH. BROWN CLARK, M.A.....*Professor of Political Economy*
ALEXANDER W. CRAWFORD, M.A., Ph.D.....*Professor of English*
CHESTER B. MARTIN, B.A. (Oxon.).....*Professor of History*
NEIL BRUCE MACLEAN, M.A.....*Professor of Mathematics*

HENRY P. ARMES, B.Sc., Ph.D.....*Lecturer in Chemistry*
A. T. CAMERON, M.A., B.Sc.....*Lecturer in Physiology*
R. K. MCCLUNG, M.A., D.Sc.....*Lecturer in Physics*

JOHN W. DORSEY, E.E.....*Lecturer in Electrical and Mechanical Engineering*
GEORGE HALSTEAD, M.Sc...*Lecturer in Materials and Hydraulics*
LESLIE I. JOHNSTONE, B.S..*Lecturer in Surveying and Geodesy*
LESSLIE R. THOMSON, B.A.Sc.....*Lecturer in Drawing and Design*
CHARLES J. TRIGGERSON, M.A., Ph.D.....*Lecturer in Zoology and Demonstrator in Physiology*
ROBERT C. WALLACE, M.A., B.Sc., Ph.D.....*Lecturer in Geology and Mineralogy*
LLOYD A. H. WARREN, M.A.....*Lecturer in Mathematics*

T. A. NEELIN, B.A.....*Demonstrator in Physics*
BALDUR OLSON, B.A. .....*Demonstrator in Chemistry*

INSTRUCTION IN THE UNIVERSITY

Instruction in the University is at present given only in the Natural and Physical Sciences, in Civil and Electrical Engineering, in the Higher Mathematics and in English, History and Political Economy.

In all departments other than those in which the University offers teaching, students may obtain the necessary instruction either at one of the colleges affiliated with the University, or at some other recognized institution of learning.

Robert Rutherford Cochrane, born August 9th, 1850, in Sullivan Township, Grey County, Ontario; from 1866 to 1875 a teacher in country schools, from 1875 to 1881, in Ottawa; graduated in 1885 from the University of Toronto with honors in Mathematics and Physics; from 1886 to 1888, Principal of Perth Collegiate Institute; in 1888, first professor and head of the Department of Mathematics in Wesley College, Winnipeg, being intimately associated with Principal J. W. Sparling in laying the foundations of the new institution; in 1904, on the organization of the Faculty of the University of Manitoba, its first professor of Mathematics, and Chairman of the University Faculty, a position which he held until his death on April 3rd, 1910.

UNIVERSITY EXAMINERS, 1910

Arts

Classics: Very Rev. Dean Coombes, M.A.; A. T. Hawley, M.A.; Rev. T. Hudon, S.J.; R. O. Jolliffe, B.A.; F. W. Clark, B.A.; Rev. J. W. Matheson, M.A.; R. A. MacLean, B.A.

Mathematics (First Year): Rev. J. F. Cross, M.A.; William Tier, M.A.; N. R. Wilson, M.A., Ph.D.; Rev. A. Leveillé, S.J.; N. B. MacLean, M.A.

Higher and Engineering Mathematics: R. R. Cochrane, B.A.; N. B. MacLean, M.A.; Frank Allen, M.A., Ph.D.

Physics (Special Courses): Frank Allen, M.A., Ph.D.; R. K. McClung, M.A., D.Sc.

Physics (General Course): Frank Allen, M.A., Ph.D.; Rev. J. Blain, S.J.; Rev. J. F. Cross, M.A.

Philosophy: Rev. J. W. Sparling, M.A., D.D.; Rev. Canon Murray, M.A.; Rev. A. B. Baird, M.A., D.D.; Rev. P. Bournival, S.J.; Rev. James Elliott, B.A., Ph.D.; Rev. J. Dick Fleming, M.A., B.D.; W. A. Corbett, M.A., LL.B.; A. B. Clark, M.A.

English: W. F. Osborne, M.A.; Rev. Canon Phair, M.A.; B. A. Smyth-Piggott, Ph.B.; A. W. Crawford, M.A., Ph.D.; R. H. Rowland, B.A.

French: W. F. Osborne, M.A.; A. D. Baker, M.A.; Rev. J. Filion, S.J.; A. M. Bothwell, M.A.

German: A. D. Baker, M.A.; C. F. Ward, M.A.; A. M. Bothwell, M.A.

History (Special Course): Chester Martin, B.A. (Oxon.); A. B. Clark, M.A.

Political Economy (Special Course): A. B. Clark, M.A.; Chester Martin, B.A. (Oxon.).

History (First and Second Years): Rev. S. G. Bland, D.D.; Rev. A. B. Baird, M.A., D.D.; Rev. J. W. Matheson, M.A.; Rev. A. Dugré, S.J.

Botany: A. H. R. Buller, B.Sc., Ph.D., D.Sc.; Swale Vincent, M.D., D.Sc.

Geology: A. H. R. Buller, B.Sc., Ph.D., D.Sc.; Swale Vincent, M.D., D.Sc.

Zoology: Swale Vincent, M.D., D.Sc.; A. H. R. Buller, B.Sc., Ph.D., D.Sc.

Chemistry: M. A. Parker, B.Sc., F.C.S.; H. P. Armes, B.Sc., Ph.D.

Physiology: Swale Vincent, M.D., D.Sc.; W. A. Gardner, B.A., M.D., C.M.; A. T. Cameron, M.A., B.Sc.
Icelandic: Rev. F. J. Bergmann, B.A.; Rev. F. Halgrimsson.
Swedish: Emil Lundkvist; Rev. F. J. Bergmann, B.A.
Hebrew: Rev. A. Stewart, D.D.; Rev. E. G. Perry, B.A., Ph.D.
Scripture: Rev. A. Stewart, D.D.; Rev. E. G. Perry, B.A., Ph.D.; Rev. Canon Talbot, M.A.

Law

A. N. McPherson, M.A., LL.B.; D. W. McKerchar, M.A., LL.B.; David Forrester, M.A., LL.B.; E. Loftus, M.A., LL.B.; W. A. Corbett, M.A., LL.B.; George H. Ross, B.A., LL.B.

Medicine

Physics: Frank Allen, M.A., Ph.D.; Rev. J. F. Cross, M.A.
Zoology: Swale Vincent, M.D., D.Sc.; A. H. R. Buller, B.Sc., Ph.D., D.Sc.
Chemistry: M. A. Parker, B.Sc., F.C.S.; H. E. Bletcher, Phm.B.
Theoretical Anatomy (First Year): E. J. Evatt, M.B., B.S.; A. Paling, M.B., B.S.
Practical Anatomy (First Year): E. J. Evatt, M.B., B.S.; R. W. Kenny, M.D., C.M.
Theoretical Anatomy (Second Year): E. J. Evatt, M.B., B.S.; A. Paling, M.B., B.S.
Practical Anatomy (Second Year): E. J. Evatt, M.B., B.S.; R. B. Mitchell, B.A., M.D., C.M.
Practical and Applied Anatomy (Third Year): James Pullar, B.A., M.D., C.M.; J. G. Lehmann, M.D., C.M.
Physiology: Swale Vincent, M.D., D.Sc.; W. A. Gardner, B.A., M.D., C.M.; A. T. Cameron, M.A., B.Sc.
Bacteriology and Pathology: Gordon Bell, B.A., M.D., C.M.; S. J. S. Peirce, B.A., M.D., C.M.
Histology: C. H. Vrooman, M.D., C.M.; J. H. Leeming, M.D.
Therapeutics: J. A. Devine, M.A., M.D., B.C.L.; R. S. Thornton, M.B., C.M.
Materia Medica and Pharmacy: C. C. Field, M.D., C.M.; Fred A. Young, B.A., M.B.
Medical Jurisprudence: William Rogers, B.A., M.D., C.M.; J. G. Munroe, M.D., C.M.
Sanitary Science: A. J. Douglas, B.A., M.D., C.M.; James Patterson, M.D., C.M.
Theoretical Medicine: William Chestnut, M.D., C.M.; R. F. Rorke, M.D.

Clinical Medicine: E. S. Popham, M.A., M.D., C.M.; C. Hunter, M.A., M.D.
Theoretical Surgery: J. McKenty, M.D., C.M.; J. S. Matheson, M.D., C.M.
Clinical Surgery: J. O. Todd, M.D., C.M.; W. R. Nichols, M.D., C.M.
Obstetrics and Diseases of Children: J. A. MacArthur, M.D., C.M.; John Tees, M.D., C.M.
Gynaecology: J. S. Gray, M.D., C.M.; D. S. MacKay, M.D., C.M.
Ophthalmology and Otology: S. W. Prowse, B.A., M.D., F.R.S.C.; Raymond Brown, M.D.
C. M. Degree: H. H. Chown, B.A., M.D., C.M.; H. C. Cunningham, M.D., C.M.

Engineering

E. E. Brydone-Jack, B.A., C.E. (Renss.); E. P. Fetherstonhaugh, B.Sc.; A. K. Grimmer, M.Sc.

Agriculture

English: G. A. Sproule, B.A.; J. C. Hooper, M.A.
Physics: F. G. Churchill, B.S.A.; G. W. Morden, M.A., Doct.Ing.
Geology: F. G. Churchill, B.S.A.; F. W. Brodrick, B.S.A.
Meteorology: F. G. Churchill, B.S.A.; G. W. Morden, M.A., Doct. Ing.
Entomology: F. W. Brodrick, B.S.A.; C. H. Lee, B.A.
Horticulture and Forestry: F. W. Brodrick, B.S.A.; C. H. Lee, B.A.
Botany: C. H. Lee, B.A.; J. C. Hooper, M.A.
Bacteriology: C. H. Lee, B.A.; J. C. Hooper, M.A.
Zoology: C. H. Lee, B.A.; J. C. Hooper, M.A.
Animal Husbandry: F. W. Peters, B.S.A.; W. J. Black, B.S.A.
Field Husbandry: S. A. Bedford; W. J. Black, B.S.A.
Chemistry: G. W. Morden, M.A., Doct.Ing.; F. G. Churchill, B.S.A.
Civics: W. J. Black, B.S.A.; G. A. Sproule, B.A.
Veterinary Science: F. Torrance, B.A., D.V.S.; F. W. Peters, B.S.A.
Dairying: J. W. Mitchell, B.A.; W. Crowe.
Agricultural Engineering: L. J. Smith, B.S.; F. G. Churchill, B.S.A.

Matriculation

Classics: F. W. Clark, B.A.; Rev. J. W. Matheson, M.A.; Rev. J. Cox, S.J.; D. M. Duncan, M.A.; W. J. Rose, B.A.; P. C. Dobson, B.A.
Mathematics: Rev. J. F. Cross, M.A.; R. Fletcher, B.A.; N. R. Wilson, M.A., Ph.D.; William Tier, M.A.; Rev. A. Leveillé, S.J.; W. N. Finlay, B.A.
Science: Alex. McIntyre, M.A.; William Tier, M.A.; N. R. Wilson, M.A., Ph.D.; R. T. Hodgson, B.A.
English: Rev. A. Stewart, D.D.; Rev. Canon Phair, M.A.; S. E. Lang, B.A.; George Young, B.A.; O. T. Gamey.
French: A. D. Baker, M.A.; C. F. Ward, M.A.; Rev. John Filion, S.J.; Miss A. L. Brunstermann.
German: A. D. Baker, M.A.; Miss A. L. Brunstermann; R. H. Rowland, B.A.
Icelandic: Rev. F. J. Bergmann, B.A.; Rev. F. Hallgrimsson.
Swedish: Emil Lundkvist; Rev. F. J. Bergmann, B.A.
History: S. J. McKee, B.A., LL.D.; A. T. Cowley, M.A.; D. McDougall, B.A.; Rev. W. J. Melvin, B.A., B.D.

SUPPLEMENTAL AND MATRICULATION EXAMINATIONS, SEPTEMBER, 1910

Classics: R. O. Jolliffe, B.A.; Rev. Canon Talbot, M.A.; D. M. Duncan, M.A.
Mathematics: William Tier, M.A.; N. B. MacLean, M.A.
Elementary Science: Alex. McIntyre, M.A.; Frank Allen, M.A., Ph.D.
Chemistry: M. A. Parker, B.Sc., F.C.S.; S. Carson Lee, B.A.
English: Rev. Canon Phair, M.A.; C. W. Laidlaw, B.A.
French: A. D. Baker, M.A.; Rev. J. Filion, S.J.
German: A. D. Baker, M.A.; R. H. Rowland, B.A.
History: Rev. S. G. Bland, D.D.; A. T. Cowley, M.A.
Philosophy: Rev. Canon Murray, M.A.; Rev. James Elliott, B.A., Ph.D.

Requirements for Matriculation into the University of Manitoba

MATRICULATION FOR ARTS

Subjects of Examination

(a) All English-speaking candidates for this examination shall take the following fixed subjects:

English,
History,
Mathematics,
Latin.

And any two of the following optional subjects:

Greek,
French,
German,
Icelandic,
Swedish,
Elementary Science (Botany and Physics).

(b) L'examen d'immatriculation pour les candidats de langue française comprend le Français, l'Histoire, les Mathématiques, le Latin, et deux quelconques des sujets suivants: le Grec, l'Anglais, l'Allemand, l'Islandais, le Suédois, et la Science Élémentaire.

Division of Examination Into Stages

The subjects of this curriculum of studies may be taken at any regular examination, at one time, or may be divided into two parts as below, which may be taken at successive examinations. They must, however, be taken in the order as here given:

Part I.—English Grammar, Composition, History, Arithmetic, Algebra and Geometry, Elementary Latin, Botany, and the elementary grammar of the language option or options which the candidate intends to select for Part II.

Part II.—English, Mathematics, Latin, and any two of the following options:—Greek, French, German, Icelandic, Swedish, Physics.

Candidates presenting themselves for the full examination at one time shall not be required to take the elementary papers on Composition, Algebra and Geometry, Latin, Greek, French, German, Icelandic or Swedish of Part I.

Examination by Subjects

Candidates who are not prepared to write on the full course may offer themselves at any regular examination in the whole

of any subject or subjects of *both* parts of this programme, such as all the English (including History), or all the Mathematics, etc., and on passing a satisfactory examination they shall receive credit therefor; but no such candidate taking the examination according to subjects shall be allowed to proceed with the First Year until he has been examined in all the subjects and has satisfied the examiners in all save one subject.

Standing Required

One hundred marks are assigned for each *paper* of Part I. Matriculation and Part II. Matriculation.

A candidate in order to pass in English must have 40 per cent. in each paper. To pass in any other paper a candidate must have 34 per cent. of the marks in that paper, and to pass the whole examination, and be placed in Third Class, he must have 40 per cent. or more on the aggregate of the marks of the required papers. If he fail to obtain 40 per cent. he shall be required to take the whole examination again. To obtain Second Class standing he must have 50 per cent. or more on the aggregate of the required papers. To obtain First Class standing he must have 67 per cent. or more on the aggregate of the required papers.

Candidates taking the examination by subjects, in order to secure any credit, shall be required to pass in half the papers they elect and to attain an average standing of 40 per cent. on all the papers they elect.

Supplemental Examinations

Candidates who fail in not more than two papers of Part I., Matriculation, and not more than two papers of Part II. Matriculation, may take a supplemental examination in the papers in which they have failed, providing they have obtained the requisite standing on the aggregate of the marks. In case of a student failing in not more than two papers of Part I., he may take these papers when writing on Part II.

Ordinary candidates who have failed in not more than two papers, and candidates taking the examination *according to subjects*, who have been examined in all the subjects and have satisfied the examiners in all save one subject, may, as conditioned students, offer themselves for the examination of the First Year; but such conditions must in each case be removed before the commencement of the Second Year. (This regulation should be read in conjunction with the regulations relating to Supplemental Examinations. See pages 171 to 174).

Each paper of the Matriculation Examination shall be considered a separate subject in determining failures.

General Regulations

Each paper of the Matriculation Examination shall be of three hours' duration.

The Matriculation Examination is held in May of each year, commencing on the fourth Monday, and in September, commencing on the third Thursday. The examination in May is held in the University Building and at local centres as provided for under the University Rules and Regulations; the September examination is held at the University Building only.

Students passing the Matriculation Examination with first class grade "B" or higher standing may obtain from the Department of Education for Manitoba a Second Class non-professional Teacher's Certificate, upon passing examinations in Bookkeeping, Agriculture, Music, Drawing and Botany. A third class non-professional certificate is granted to students making Second Class standing in the Matriculation Examination. Students falling below Second Class standing receive no recognition whatever under the regulations of the Department of Education.

PART I.

English and History

Grammar—West's English Grammar; or
Grammaire Française; Larive et Fleury.

Composition—An essay on one of several themes set by the examiners. In order to pass in this subject, legible writing, correct spelling and punctuation, and proper construction of sentences are indispensable. The candidate should also give attention to the structure of the whole essay, the effective ordering of the thought, and the accurate employment of a good English vocabulary. About two pages of foolscap is suggested as the proper length for the essay; but quality, not quantity, will be mainly regarded.

As a guide to teaching, Sykes' "Elementary Composition" is recommended.

The following texts are prescribed as affording models of style and material for work in composition. A general knowledge of their contents is required. One or more of the subjects for essay will be taken from them:

1911. Macaulay's Essay on Clive.

1912. Macaulay's Essay on Warren Hastings.

History—WRONG's British Nation. CLEMENT's History of Canada; or

DRIOUX—Histoire d'Angleterre, et BOURGEOIS—Histoire du Canada.

The English and History papers will be examined for spelling, and the examiners will include in their report a statement of the standing of each candidate in this subject. Students found deficient in this respect will be required to pass an examination in dictation before proceeding with their course.

Mathematics

Arithmetic and Mensuration—Advanced Arithmetic, omitting progressions and logarithms (Lyman or Hamblin Smith, New Edition).

Algebra and Geometry—Hall and Knight's Elementary Algebra, Chaps. I.—XVII., inclusive, together with a knowledge of graphs sufficient for the solution of equations of the first degree.

Baker's Elementary Plane Geometry, Inductive and Deductive. Stress will be laid on ability to construct figures accurately.

In the demonstration of theorems the starting point shall be the definitions given in the prescribed texts.

Latin

Hagarty's Introductory Latin Grammar, pages 1 to 311.

Greek

Burgess and Bonner, Elementary Greek, to end of Exercise 40.

French

High School French Grammar (Fraser and Squair), Part I.; also unspecified passages of easy French.

Or for French students—Harvey's English Grammar (pages 1 to 104).

German

High School German Grammar (Van der Smissen and Fraser, 1909 Edition), pages 1 to 132; also unspecified passages of easy German.

Icelandic

Wimmer's Icelandic Grammar, pages 19 to 90. Translation of easy passages from English into Icelandic and from Icelandic into English. Dictation and orthographical exercises. Selections from Melsted's Modern Authors.

Swedish

Sundin's Swedish College Grammar. Translation of Swedish into English and English into Swedish. Writing Swedish from dictation. Short essays. Selection from Modern Authors composed for Swedish Schools, Parts II. and IV.

Elementary Science

Botany—Elements of Botany, Bergen.

[From the 1904 and 1906 editions of Bergen's Botany the following pages are to be omitted: 210 (Classification of Cryptograms) to 262. The appendix will be examined on.]

PART II.

English

1. *Rhetoric and Composition*—

(a) The investigation of rhetorical principles along the lines laid down in Genung's "Outlines of Rhetoric."

(b) An Essay on one of several themes set by the examiners. In order to pass in this subject, legible writing, correct spelling and punctuation, and proper construction of sentences are indispensable. The candidate should also give attention to the structure of the whole essay, the effective ordering of the thought, and the accurate employment of a good English vocabulary. About two pages of foolscap is suggested as the proper length for the essay; but quality, not quantity, will be mainly regarded.

Outlines of Rhetoric—Genung (Ginn & Co.).

The marks shall be divided as follows: 25 per cent. for Principles of Rhetoric and 75 per cent. for the Essay.

2. *Literature*—Intelligent comprehension of, and familiarity with, the prescribed texts shall be required, and the candidate shall be expected to have memorized some of the finest passages.

1911. SHAKESPEARE: Macbeth.
SCOTT: Ivanhoe.
WORDSWORTH: Michael; Three Years She Grew in Sun and Shower; She Was a Phantom of Delight; There is a Flower, the Lesser Celandine; Ethereal Minstrel, Pilgrim of the Sky; The Green Linnet; To the Cuckoo; With Little Here to Do or See.

1912. SHAKESPEARE: Merchant of Venice.
SCOTT: Quentin Durward.
COLERIDGE: Ancient Mariner.

The English papers will be examined for spelling, and the examiners will include in their report a statement of the standing of each candidate in this subject. Students found deficient in this respect will be required to pass an examination in dictation before proceeding with their course.

FRENCH EQUIVALENTS.

In lieu of the English the following will be the French equivalents for French-speaking candidates:

1. (a) *Principes de Littérature*: Mestre (pages 13-218, et 413-433). Principes généraux, genres en prose et versification française.

(b) Un essai d' à peu près deux pages, grand format, sur un des sujets indiqués par les examinateurs. L' écriture devra être lisible, l'orthographe et la ponctuation correctes, et la construction des phrases soignée. Il faudra aussi faire attention au plan général de la composition, à l'ordonnance des idées, et à la propriété des termes. Sa valeur dépendra plutôt de la qualité que de la quantité.

On allouera 25% pour les principes de littérature et 75% pour l'essai.

Extraits en Prose: Molière, Mdme. de Sévigné, La Bruyère, être bien compris du candidat et lui être familiers; il devra aussi avoir appris par coeur quelques-uns des plus beaux passages.

1910. MODÈLES FRANÇAIS: *Procès*, Tome II.

Extraits en Prose: Molière, Mdme. de Sévigné, La Bruyère, Hamilton, Fénélon, Le Sage, Buffon, J. J. Rousseau, Joseph et Xavier de Maistre, Thiers, Veuillot et Daudet.

Extraits Poétiques: Corneille, Racine, Regnard, Lamartine, Delavigne, Hugo, Coppée.

RACINE: Esther.

1911. MODÈLES FRANÇAIS, comme en 1910.

RACINE: Les Plaideurs.

Mathematics

1. *Algebra*—Hall and Knight's Elementary Algebra, 8th edition, Chapters I-XXVIII., XXX. to par. 235, XXXII.-XXXV., including graphs for equations of first and second degrees.

2. *Geometry*—Baker's Theoretical Geometry for Schools to page 209.

In demonstrating a proposition whose proof is given in the prescribed text no use shall be made of a proposition which in the said text follows the required proposition.

In the demonstration of theorems the starting point shall be the definitions given in the prescribed texts.

Latin

Translation into English of passages from prescribed texts.

Translation at sight (with the aid of vocabularies) of passages from some easy prose author, to which special importance will be attached. Candidates will be expected to have supplemented the reading of the prescribed texts by additional practice in the translation of Latin.

Grammatical questions on the passages from prescribed texts shall be set, and such other questions as arise naturally from the context.

Translation into Latin of sentences and of easy narrative passages based upon the prescribed prose texts.

The following are the prescribed texts:—

Caesar: Bellum Gallicum, Book IV., Chapters 20-38, and Book V., Chapters 1-23.

Vergil: Æneid, Book I., ll. 1-510.

Two papers as follows:—

(1) Vergil and Cæsar.

(2) Latin Grammar, Prose Composition and Sight Translation.

[N.B.—Robertson and Carruthers' "Matriculation Latin" (1909 Edition) contains all the work prescribed for Part II. in Authors and Prose Composition.]

Greek

Translation into English of passages from prescribed texts.

Translation at sight (with the aid of vocabularies) of passages from some easy prose author, to which special importance will be attached. Candidates will be expected to have

supplemented the reading of the prescribed texts by additional practice in the translation of Greek.

Grammatical questions on the passages from prescribed texts shall be set, and such other questions as arise naturally from the context.

Translation into Greek of sentences and of easy narrative passages based upon the prescribed prose texts.

The following is the prescribed text:—

SELECTIONS FROM XENOPHON, Anabasis I., in White's Beginner's Greek Book, and Anabasis II.

Two papers as follows:—

(1) XENOPHON.

(2) Greek Grammar, with simple Prose Composition, based on White's Beginner's Greek Book, pp. 1-148 and Lessons lix, lxii, lxv, lxviii, lxx, lxxii, lxxiv, lxxvii, lxxix, lxxxi, and also the paradigms on pages 282-301.

Sight Translation.

French

1. (*a*) *Grammar.*—High School French Grammar, Part II., pages 129 to 233 inclusive, with the associated exercises.

(*b*) *Composition.*—(1) Translation into French of short sentences as a test of the candidate's knowledge of grammatical forms and structure, and the formation in French of sentences of similar character; and (2) translation of easy passages from English into French.

(*c*) *Sight Translation.*—Translation of unspecified passages from easy French Authors.

2. *Authors.*—An examination on the following texts:

1910. SOUVESTRE: Un Philosophe sous les Toits.

1911. ENAULT: Le Chien du Capitaine (Heath & Co.)
LABICHE: Le Voyage de Monsieur Perrichon (Ginn & Co.)

ENGLISH EQUIVALENTS.

In lieu of the French the following will be the English for French-speaking students:

1. (*a*) *Grammaire*—Harvey's Practical Grammar of the English Language, pp. 1-135. (Amer. Book Co.)

(*b*) *Composition*—(1) Traduire du français en anglais quelques phrases assez courtes, qui montrent que le candidat sait appliquer les règles de la grammaire; construire quelques phrases anglaises du même genre. (2) Traduire en anglais quelques passages faciles de prose française.

2. *Auteurs*—Version tirée d'auteurs anglais faciles à com-

prendre et non connus d'avance. Examen sur les auteurs prescrits:

DICKENS—A Christmas Carol.

IRVING—Sketch Book. (Hachette).

German

1. (*a*) *Grammar*—High School German Grammar (Van der Smissen and Fraser, 1909 Edition), pages 1-223.

(*b*) *Composition*—(1) Translation into German of short English sentences as a test of the candidate's knowledge of grammatical forms and structure, and the formation in German of sentences of similar character; and (2) translation of easy passages from English into German.

(*c*) *Sight Translation.*—Translation of unspecified passages from easy German Authors.

2. *Authors.*—An examination on the following texts:—

1910. ZSCHOKKE, Der Zerbrochene Krug; HEINE, Lorelei, Du bist wie eine Blume; UHLAND, Schäfers Sonntagslied, Das Schloss am Meer; CHAMISSO, Das Schloss Boncourt; CLAUDIUS, Die Sterne, Der Riese Goliath; GOETHE, Mignon, Erlkönig, Der Sänger; SCHILLER, Der Jüngling am Bache.

HAUFF: Das Kalte Herz.

1911. GERSTÄCKER: Germelshausen (Holt & Co.)

MÜLLER: Im Wartesalon erster Klasse; and

POHL: Die Schulreiterin (found in Manley and Allen's "Four German Comedies," published by Ginn & Co.)

Icelandic

1. (*a*) *Grammar.*

(*b*) *Composition*—(1) Translation into Icelandic of idiomatic expressions and phrases in English. Construction of sentences in Icelandic as a test of knowledge of grammatical forms and structure; (2) translation of passages from Icelandic into English.

(*c*) *Sight Translation.*—Translation of unspecified passages from easy Icelandic Authors.

3. *Authors.*—An examination on the following texts:—

1910.—JÓN THORODDSEN, Ísland, Til Íslendinga, Dálitil ferðasaga; GRÍMUR THOMSEN, Jólnasumbl, Á Glæsivöllum, Skúli fógeti, Skúlaskeið, Kirkjugarðsvísur, Glámur, Sköfnungur; ÁRNASON og GRÍMSSON, Álfa-

dans, Gilitrutt, Djákninn á Myrká, Frá Sæmundi fróða, Seint fyllist sálin prestanna, Jón frá Geitaskarði, Sagan af Hlini konungssyni; BENEDICT GRÖNDAL, Æskan, Prometheves, Hret, Heim, Hugsun, Hugrún, Úr Heljarslóðarorustu; PÁLL ÓLAFSSON, Litli fossinn, Sumarkveðja, Systurminning; GUÐBR. VIGFÚSSON, Timatal, Úr Ferðasögu; GÍSLI BRYNJÓLFSSON, Úr Faraldi Grátur Jakobs yfir Rakel, Endurminningar, Vísur; STIENGRÍMUR THORSTEINSSON, Gilsbakkaljóð, Haustkvöld, Kveðja, Vorhvöt, etc.; MATTH. JOCHUMSSON, Lofsöngur, Þingvallaminni, Guðbrandur Hólabiskup, Eggert Ólafsson, Nýársósk, Sorg.

1911.—BJARNI THORARENSEN, Fljótshlíð, Herhvöt, Herganga, Ísland, Sigrúnarljóð, Sæmundur Hólm, Eyjafjallajökull, Þórarinn Öfjörð; GÍSLI BRYNJÓLFSSON, Hvöt, Veturinn, Brúðkaupsvísa, Freyjukettirnir, Oddur Hjaltalín; BJÖRN GUNNLAUGSSON, Úr Njólu, Jón Bjarnason; SVEINBJÖRN EGILSSON, Sumarkveðja, Kvæði, Skilnaðarvísur, Úr Ilíonskviðu; SIGURÐUR BREIÐFJÖRÐ, Úr rímum; BALDVIN EINARSSON, Ármann á alþingi; TÓMAS SÆMUNDSSON, Fjölnir; JÓNAS HALLGRÍMSSON, Ísland, Vísur Íslendinga, Gunnarshólmi, Kveðja Íslendinga, Skjaldbreiður, Bjarni Thórarensen, síra Þorsteinn Helgason, Ásta, Óhræsið, Grasaferð, Úr gamanbréfi; KONRÁÐ GÍSLASON, Sagan af Árna-Birni og mér, Ágrip af ræðu, Um nám forntungu vorrar; JÓN SIGURÐSSON, Úr ritgjörðum; PÁLL MELSTED, Benjamín Franklin og George Washington.

Swedish

1. (a) *Grammar*—Beckman's Advanced Swedish Grammar.

(b) *Composition*—Translation from Swedish into English and from English into Swedish of idiomatic expressions. Writing of short essays.

2. *Authors*—Translation of easy passages from modern authors. Examination on the following texts:

1910. KELLGREN, Den nya skapelsen; A. FRYXELL, Slaget vid Lutzen; E. G. GEIJER, Manhem, Ur minnen; J. O. WALLIN, Blick till graven, Tal till svenska bibelsäll-

skapet 1886, Höst betragtelse; SJÖBERG, (Vitalis) Försakelse, Ensligens sång, Den bäste vännen, Frid, Stagnelius; ATTERBOM, Ur lycksalighetens ö; DALGREN Vårsång; GRAFSTRÖM, Norrland, Sensetivan, Harpan; VENNERBERG, Ur gluntarna, En solnedgång; V. RYDBERG, Dexippos, Ur romerska kejsare i marmor, (Tiberius).

1911. FRANZÉN, Människans anlete, Afskedssång af beväringsmän; A. M. LENGREN, Pojkarna, Den glada festen, Porträtterna, Fröken Juliana; C. M. BELLMAN, Haga, Fiskarfänget; KARL DAVID AF WIRSEN, Sikars Brunn, Källan, Seltagande, Pelarskogen i San Paolo, Sverige; E. SEHLSTEDT, Snösparven, Våren kommer, Visa; Z. TOPELIUS, Min moder, Vintergatan; P. VIKNER, Min moders testamente; B. E. MALMSTRÖM, Ur minnestal öfver E. G. Geijer, Angelika, Hvi suckar det så tungt uti skogen, Ödmjuken er; C. A. NICANDER, Vågen, Mitt lif, min sång, min död.

Elementary Science

Physics—High School Physical Science, Part I. (Revised edition.)

MATRICULATION FOR MEDICINE

Subjects of Examination

All candidates for the Matriculation Examination for Medicine must take the following fixed subjects:

1. Latin.
2. Mathematics, embracing Arithmetic, Algebra and Geometry.
3. English.
4. History.
5. Botany.
6. Physics.

Division of Examination

The subjects enumerated above may be taken in one examination at one time, or in two parts, at successive examinations, as outlined for Arts Matriculation, or by subjects or groups of subjects as in the case of Arts Matriculation. (See pages 24 and 25).

Scope of Work and Standing Required

In the case of each of the subjects of this examination the work prescribed shall be the same as that for Parts I. and II. of the Arts Matriculation Examination, and the same standard shall be required to entitle the candidate to pass.

Each paper of the examination shall be considered as a separate subject in determining failures.

Accuracy in Spelling is required. Students found deficient in this respect will be required to pass an examination in dictation before they will be allowed to proceed with their course.

Supplemental Examinations

The same regulations respecting Supplemental Examinations prevail as in the case of Arts Matriculation, *except that only fully matriculated students shall be allowed to present themselves for any higher examination.* Candidates, however, who present teachers' certificates not covering Latin may as conditioned students proceed with their course with the view of subsequently obtaining full Matriculation standing. Such con-

dition must be removed before the commencement of the Second Year.

General Regulations

Each paper of the Matriculation Examination for Medicine shall be of three hours' duration.

The Matriculation Examination for Medicine shall be held twice a year, viz.: in May, beginning on the fourth Monday, and in September beginning on the third Thursday. There shall be no Supplemental Examination granted except at these dates.

Equivalent Examinations

In place of the above Matriculation Examination the University has agreed to accept the Matriculation of the College of Physicians and Surgeons of the Provinces of Quebec and Ontario; the Medical Students' registration certificate of the Medical Council of Great Britain and Ireland; the non-professional Second-Class Teachers' Certificates of Manitoba, Ontario, Saskatchewan and Alberta; also the Ontario High School Intermediate and Junior Leaving Examinations; except that the Latin and the compulsory Elementary Science of the Matriculation Examination of the University must be taken by those who have not taken these subjects in the said High School or Teachers' Examination.

Holders of certificates of educational value from other institutions than those mentioned will receive such standing as the Council of the University may see fit to grant.

A Bachelor of Arts of any University in His Majesty's Dominions is admitted to the study of medicine without further examination.

MATRICULATION FOR ENGINEERING

In order to take the regular course leading to a degree in Civil or Electrical Engineering, a student must pass a Matriculation Examination in the following subjects:

1. MATHEMATICS—

   (a) *Arithmetic*—As in Arts, save that special attention will be given to Mensuration. See page 27.

   (b) *Algebra*—As in Arts, with the addition of Indices, Surds, Permutations and Combinations, Binomial Theorem, Logarithms, Theory of Quadratic Equations (as in Hall & Knight's Elementary Algebra, omitting Chapters 40 to 43, inclusive). See pages 27 and 30. (Separate paper.)

   (c) *Geometry*—As in Arts, with the addition of Book V. and "Additional Propositions." See pages 27 and 30. (Separate paper.)

   (d) *Trigonometry*—Measurement of Angles, Trigonometric Ratios, Functions of One Angle, Two Angles and Multiple Angles, etc. (as in Hall & Knight's Trigonometry, Chapters I to 18, inclusive).

2. ENGLISH—As in Arts. See pages 26 and 28-29.

3. HISTORY—As in Arts. See page 27.

4. SCIENCE—

   (a) *Botany*—Elements of Botany—Bergen.

   (b) *Physics*—High School Physical Science (Part I.), revised edition.

5. A FOREIGN LANGUAGE—Any one of the following: Latin, Greek, French, German. See pages 27 and 30-32.

When the work is common, the examination in each of these subjects is the same as for Arts. All standards and regulations of the Arts Matriculation prevail in Engineering Matriculation. See pages 24 to 26.

MATRICULATION FOR LAW.

In order to enter upon the course of study for the Degree in Law, a student must pass a Matriculation examination, the subjects of which are the same as those required for Matriculation for Arts. (See pages 24 and 26 to 33). The same standards and regulations prevail as in Arts Matriculation. (See pages 24 to 26).

Entrance requirements for other courses offered by the University of Manitoba are outlined below as follows: For candidates for the Degree of Bachelor of Pharmacy on page 160; for students taking the course in Commercial Education on page 162; for students of the advanced course in Agriculture on page 164.

Curriculum in Arts

CURRICULUM IN ARTS

FIRST YEAR

Note 1.—All English-speaking candidates for this examination shall take the following fixed subjects: English, Mathematics, Latin, History, and any two of the following options: Greek, French, German, Icelandic, Swedish, Physics.

Note 2.—L'examen pour les candidats de langue française comprend le Français, les Mathématiques, le Latin, l'Histoire, et deux quelconques des sujets suivants: le Grec, l'Anglais, l'Allemand, l'Islandais, le Suédois, la Physique.

For students of the First Year, classes are provided by the University only in the subject of Physics. Instruction in all other subjects must be obtained at one of the affiliated Colleges or at some other educational institution.

English

(1) *English Verse*—Critical reading of the following:

1910—SHAKESPEARE: The Tempest.

1911—SHAKESPEARE: King John, Romeo and Juliet.

(2) 1910—*English Prose, Rhetoric and Composition.* The following are prescribed:

Sherman's "Analytics of Literature," Chapters I-X, inclusive, and XIV, XV, XVI, XXI, XXII, XXIII, XXIV (Ginn & Co.).

"Modern English Prose," Carpenter and Brewster, pages 1-108 (The Macmillan Co.)

1911—*History of English Literature, Prose and Composition.* The following are prescribed:

Long's "History of English Literature," Chapters I-VIII, inclusive (Ginn & Co.).

"Modern English Prose," Carpenter and Brewster, pages 108-214 (The Macmillan Co.).

The examination will include an essay, to be composed on one of a number of assigned subjects, which will be based on the prescribed prose selections.

In addition to the above, there will be required, during the term, from each student of the First Year, an essay. This must be written in the University Building, in the presence of one examiner or more, at 2 p.m. on the 7th day of January, 1911. The essay is not to exceed one thousand words nor fall below five hundred in length.

[N.B.—Non-collegiate students are not required to write this essay.]

The subject of the essay for 1910-11 shall be:

Longfellow's "The Golden Legend."

FRENCH EQUIVALENTS

(For French-speaking students).

(1) *Étude critique des auteurs*:

1911—MOLIERE: L'Avare; Le Bourgeois Gentilhomme.

1912—CORNEILLE: Polyeucte.
RACINE: Athalie.

(2) *Prose, Littérature et Composition*:

1911—VEREST: Manuel de Littérature, pp. 126-441.
PROCÈS: Modèles Français, Tome III.

L'examen doit comprendre un essai sur un de plusieurs sujets proposés au choix du candidat en imitation des auteurs indiqués.

De plus, dans le courant de l'année scolaire, chaque candidat écrira, dans une salle de l'Université, une composition qui devra être remise au Régistraire le 7 janvier, 1911. Cette composition devra renfermer au moins cinq cents mots et ne pas dépasser mille.

Sujet de Composition:

1911—"Crémazie."

Mathematics

(1) *Geometry*—Baker's Geometry for Schools, Book V., and propositions 13, 14, 15, 18, 19 and 20 in appendix.

In demonstrating a proposition whose proof is given in the prescribed text, no use shall be made of a proposition which in the said text follows the required proposition.

Analytic Geometry of point, line and circle for rectangular axes. (Baker's Analytic Geometry for Beginners.)

(2) *Algebra*—Hall and Knight's Elementary Algebra, Chapters XXX, XXXI, XXXVI-XXXIX, XLII, XLIV.

(3) *Trigonometry*—Hall and Knight, Chapters I-XVIII, inclusive, as far as page 207. No questions will be set involving a knowledge of circular measure.

In the demonstration of theorems the starting point shall be the definitions given in the prescribed texts.

Latin

(1) *Authors*—

1910—HORACE: Selected Odes, omitting 9, 14, 31. (Wickham, Clarendon Press).

CICERO: In Catilinam I., and Pro Archia.

1911—HORACE: Selected Odes, omitting 9, 14, 31. (Wickham, Clarendon Press).

CICERO: Pro Lege Manilia.

(2) *Grammar*—BENNETT: With special reference to Parts I-IV.

Composition—BRADLEY—ARNOLD's Latin Prose Composition (Exercises 1-35), with simple continuous prose passages.

Sight Translation.

History

Wolfson's "Essentials in Ancient History (pp. 57-417); or,

Abbé P. Gagnol: "Histoire de la Grèce Ancienne," et "Histoire Romaine."

Greek

(1) *Authors*—

1910—Homer: Odyssey VII. (Merry, Clarendon Press).

Lysias: Contra Eratosthenem. (Shuckburgh, Macmillan & Co.)

1911—Homer: Odyssey IX. (Merry, Clarendon Press.)

Lucian: Vera Historia, Books I and II. (Jerram, Clarendon Press.)

(2) *Grammar*—Goodwin's Greek Grammar, with special reference to Parts I and II.

Composition—Pitman's Greek Prose Composition. (Macmillan & Co.)

Sight Translation.

French

(1) *Grammar, Composition, Dictation and Sight Translation.* High School French Grammar. A study of the irregular verbs, and pages 233-336, inclusive, with associated exercises.

(2) *Authors*—An examination on prescribed texts:

1910—Augier: Le Gendre de M. Poirier. (Heath & Co).
Bazin: Contes Choisis. (Heath & Co.)

1911—George Sand: La Mare au Diable. (Heath & Co.)
Molière: Le Bourgeois Gentilhomme. (Heath & Co.)

ENGLISH EQUIVALENTS

(For French-speaking students.)

(1) *Grammaire, Composition, Dictée et Traduction à première vue.* Harvey's Practical English Grammar (de la page 105 à la page 192).

(2) *Examen sur les auteurs*:

1910—Shakespeare: Macbeth.
Goldsmith: The Deserted Village.

1911—Shakespeare: Julius Cæsar.
Newman: Callista.

German

(1) *Grammar, Composition, Dictation and Sight Translation*—High School German Grammar. (Van der Smissen and Fraser. 1909 edition.)

Pope's "German Composition," Part I, is recommended.

(2) An examination on prescribed texts:

1910—Keller: Kleider Machen Leute. (Heath & Co.)
Freytag: Die Journalisten. (Ginn & Co.)

1911—Hillern: Höher als die Kirche. (Ginn & Co.)
Lessing: Minna von Barnhelm. (Ginn & Co.)

Icelandic

(1) Grammar and Composition. Writing Icelandic from dictation. Translation from Icelandic into English, and from English into Icelandic. Writing of short essays and digests of books.

(2) An examination on prescribed texts:

1910—Godasögur og forneskjusögur.
Egils Saga.

1911—Laxdæla.
Eyrbyggja.

Swedish

(1) Grammar and Composition. Translation from English into Swedish and from Swedish into English. Writing of essays.

(2) Examination on prescribed texts:

Esaias Tegner: Frithiof's Saga.

Swedish Literature from 1772 to 1830.

Karl Wartburg: Svensk Literaturhistoria.

A. Ekerman: Läsebok till Svenska Literaturhistorian.

Physics

This subject will be treated as outlined on pages 105 to 106.

Each paper of this examination shall be regarded as a separate subject in considering failures.

A candidate, in order to pass in any paper, must have 34 per cent. of the marks in that paper, and to pass the whole examination and obtain Third Class standing he must have 40 per cent. of the aggregate of the marks assigned. If he fail to obtain 40 per cent. he shall be required to take the whole examination again.

To obtain Second Class standing he must have 50 per cent. of the aggregate of the marks assigned.

To obtain First Class standing, grade B, he must have 67 per cent. of the aggregate of the marks assigned.

To obtain First Class standing, grade A, he must have 80 per cent. of the aggregate of the marks assigned.

Candidates who may have failed in not more than two papers in the examination may, as conditioned students, proceed with their course, with the view of subsequently obtaining the full standing of the First Year; but all conditions from the examination of the First Year must be removed before the commencement of the Third Year. (This regulation should be read in conjunction with the regulations relating to Supplemental Examinations. (See page 171).

Note—A student passing the examination of the First Year with First Class grade "B" or higher standing may obtain from the Department of Education for Manitoba a First Class non-professional Teacher's Certificate. A student passing with Second Class standing may obtain a Second Class non-professional Certificate. In each case the applicant for a certificate must satisfy the requirements of the Department in Bookkeeping, Agriculture, Music, Drawing and Botany.

SECOND YEAR

Note 1.—All English-speaking candidates for the examination of the Second Year shall take the following fixed subjects: English, Philosophy, Latin, History, and any two of the following options: Greek, French, German, Icelandic, Swedish, Mathematics, Chemistry, Biology.

Students intending to take the Mathematical Course or the Natural Science Course are recommended to choose as their options two of the following: Mathematics, Chemistry, Biology.

Note 2.—L'examen de la deuxième année pour les candidats de langue française comprend le Français, la Logique, le Latin, l'Histoire, et deux quelconques des sujets suivants: le Grec, l'Anglais, l'Allemand, l'Islandais, le Suédois, les Mathématiques, et la Chimie.

For students of the Second Year, classes are provided by the University only in the subjects of Mathematics, Chemistry and Biology. Instruction in all other subjects must be obtained at one of the affiliated Colleges or at some other educational institution.

English.

(1) *English Verse*—

1910—Critical reading of the following:

SHAKESPEARE: Hamlet.

1911—Rapid critical reading of the following:

MILTON: Lycidas; L'Allegro; Il Penseroso.

DRYDEN: Alexander's Feast.

POPE: The Rape of the Lock.

GOLDSMITH: The Deserted Village.

GRAY: The Bard.

BURNS: Tam o' Shanter.

WORDSWORTH: Lines Composed a few miles above Tintern Abbey; Resolution and Independence; The Happy Warrior; Ode on Intimations of Immortality.

COLERIDGE: Christabel; Kubla Khan.

BYRON: Canto III. of Childe Harold's Pilgrimage.

KEATS: The Eve of St. Agnes.

TENNYSON: The Lady of Shallott; Oenone; Mort d'Arthur.

BROWNING: My Last Duchess; The Bishop Orders His Tomb at St. Praxed's.

ARNOLD: The Scholar Gypsy.

(The above poems are contained in "The English Parnassus," edited by Dixon and Grierson, and published by the Clarendon Press, Oxford.)

(2) *History of Literature, Prose and Composition—*

1910—STOPFORD BROOKE: Primer of English Literature.

CARPENTER AND BREWSTER: Modern English Prose, pages 215-329. (The Macmillan Co.)

1911—LONG: History of English Literature (Ginn & Co.) Chapter IX to end.

CARPENTER AND BREWSTER: Modern English Prose, pages 330 to end. (The Macmillan Co.)

This examination will include an essay to be composed on one of a number of assigned subjects, which will be based on the prescribed prose selections.

In addition to the above, there will be required, during the term, from each student in the Second Year one essay. This must be written in the University Building, in the presence of one examiner or more, at 2 p.m., on the 7th day of January. The essay is not to exceed 1,000 words, or fall below five hundred in length. (Non-collegiate candidates are not required to write this essay.)

The subject of the essay for 1911 shall be:

The Morality Play, "Everyman."

FRENCH EQUIVALENTS.

(For French-speaking students).

(1) *Étude critique des auteurs*:

1810.—Procès: Modèles Français, Tome III. Extraits en Poésie; Lamartine, Hugo, Musset, Gilbert, Laprade, Sully Prudhomme, A. Chénier, Molière.

Molière: Les Precieuses Ridicules.

1911.—Procès: Modèles Français, Tome III. Extraits en Poésie; Lamartine, Hugo, Musset, Gilbert, Laprade, Sully Prudhomme, A. Chénier.

Molière: Les Précieuses Ridicules.

Corneille: Le Menteur.

(2) *Prose, Rhétorique et Composition.*

1910—Verest: Manuel de Littérature, Livre IV., L'Eloquence (pages 532-669).

Lacordaire: Eloge du Général Drouot.

Rivarol: De l'universalité de la langue française.

Bossuet: Oraison funèbre de Condé.

1911—Verest: Manuel de Littérature, Livre III., Chapitre 3, La Poésie dramatique (pp. 441-499); Livre IV., L'éloquence (pp. 532-669.)

Bossuet: Sermon sur l'ambition. (Lebarq.)

Bourdalone: Sermons choisis. (Hatsfeld.)

Lacordaire: Eloge funèbre de Daniel O'Connell.

Joubert: Pensées, maximes et essais.

L'examen doit comprendre un essai sur un de plusieurs sujets proposés au choix du candidat en imitation des auteurs indiqués.

De plus, dans le courant de l'année scolaire, chaque candidat écrira, dans une salle de l'Université une composition, qui devra être remise au Régistraire le 7 janvier. Cette composition devra renfermer au moins cinq cents mots et ne pas depasser mille.

Le sujet pour 1911—"L'eloquence parlementaire."

Philosophy

(1) *Logic*—Creighton: Introduction and Part I.; or Russo.
(2) *Ethics*—Janet: Elements of Morals.

Latin

(1) *Authors*—

1910—Horace: Epistles I., omitting 3, 5, 8, 9, 17, 18 (Shuckburgh, Pitt Press Series.)
Livy: Book XXII.

1911—Cicero: De Senectute.
Vergil: Aeneid VI.

(2) *Grammar*—Bennett, with special reference to Parts V. and VI.
Composition—Bradley-Arnold's Latin Prose Composition (completed). Continuous Prose.

Sight Translation.

History

Adams: "European History" (The Macmillan Co.) pp. 17-51 and 173-558.

Or Jean Moeller: "Histoire du Moyen-Age," "Histoire Moderne," et "Histoire Contemporaine."

Greek

(1) *Authors*—

1910—Euripides: Hecuba. (Heberden, Clarendon Press.)
Homer: Iliad III. (Monro, Clarendon Press.)
Plato: Laches. (Tatham, Macmillan & Co.)

1911—Euripides: Alcestis. (Hadley, Pitt Press.)
Homer: Iliad I. (Monro.)
Plato: Apology. (Adam, Pitt Press.)

(2) *Grammar*—Goodwin's Greek Grammar, with special reference to Parts III-V.

Composition—Sidgwick's Greek Prose, Part I.

Sight Translation.

French

(1) Grammar and Composition, Dictation and Sight Translation.

(2) An examination on prescribed texts:

1910—La Fontaine: Fables, Books IX-XII, inclusive.

De Vigny: La Canne de Jonc. (Heath.)

Crèmazie and Fréchette: Poems in "Les Fleurs de la Poésie Canadienne."

1911—La Fontaine: Fables, Books III and IV.

Beaumarchais: Le Barbier de Séville (Heath & Co.)

Feuillet: Roman d'un Jeune Homme Pauvre (Heath & Co.)

English Equivalents.

In lieu of the above French, the following shall be the English for French-speaking students:

(1) Grammaire et Composition. Dictée et Traduction à première vue. Harvey's Practical English Grammar (de la page 192 à la fin.)

(2) Examen sur les auteurs:

1910—Milton: Paradise Lost, Book I.
Shakespeare: Julius Cæsar.

1911—Milton: Paradise Lost, Book I.
Shakespeare. Coriolanus.

German

(1) Grammar and Composition, Dictation and Sight Translation.

(2) An examination on prescribed texts:

1910—HEINE: Die Harzreise, with lyrical selections. (Ginn & Co.)

SCHILLER: Die Jungfrau von Orleans. (Holt & Co.)

1911—KELLER: Romeo and Julia auf dem Dorfe. (Heath & Co.)

SCHILLER: Wilhelm Tell. (Heath & Co.)

Icelandic

(1) Grammar and Composition. Dictation, Translation and Essays.

(2) Examination on prescribed texts:

1910—Sæmundar Edda, complete, ed. Finnur Jónsson. Collateral Reading: The prose part of Snorra Edda.

1911—Sæmundar Edda, Heroic Lays, ed. Finnur Jónsson. Bokmenta Saga, Finnur Jónsson.

Swedish

(1) Grammar and Composition. Translation and Essays.

(2) Examination on prescribed texts:—

KARL SNOILSKY: Svenska bilder.

J. O. WALIN: Dödens ängel.

Swedish literature from 1830 to the present time.

KARL WARTBURG: Svensk literaturhistoria.

A. ÅKERMAN: Läsebok till Svenska literaturhistorien.

Mathematics

(1) *Algebra*—Hall and Knight's Higher Algebra, Chapters 1, 2, 3, 6, 8, 9, 10, 12, 13, 14, 17, 18. (Two hours per week during the first term.)

Trigonometry—Hall and Knight's Plane Trigonometry (4th edition or later editions), chapters 19 to 23, inclusive. (Two hours per week during the first term.)

(2) *Solid Geometry*—Hall and Stevens' School Geometry, Part VI., omitting from Section 36 to the end. (Two hours per week during the second term.)

Analytical Geometry—Baker's Analytical Geometry, chapters 6 to 9, inclusive. (Three hours per week during the second term.)

Two papers will be set,—one on Algebra and Trigonometry, and one on Geometry.

Chemistry

This course consists of about fifty lectures and twenty-five periods of laboratory work, and will be treated as outlined in the syllabus on page 113.

Biology

Botany—(See syllabus, pages 109-110).

The following books of reference are recommended:

A Text-book of Botany, Strasburger. (The Macmillan Company.)

Principles of Botany, Bergen and Davis. (Ginn & Co.)

Flowers, Fruits and Leaves, Sir John Lubbock. (The Macmillan Company.)

Zoology—(See syllabus, page 122).

Each paper of this examination shall be regarded as a separate subject in considering failures.

The same percentages are required as for the examination of the First Year.

No student shall be allowed to present himself for examination in Chemistry, in Mathematics, in Biology or in Physics of this Year who does not present from the University Faculty, or from an affiliated college where such work is done in the college, a certificate of having attended 75 per cent. of the lectures delivered in said subject. This regulation, however, shall not affect any non-collegiate candidate for examination.

Candidates who have failed in not more than two papers in this examination may, as conditioned students, proceed with their course, with the view of subsequently obtaining the full standing of the Second Year, but such conditions must be removed before the commencement of the Fourth Year. (This regulation should be read in conjunction with the regulations relating to Supplemental Examinations. See page 169.)

THIRD AND FOURTH YEARS

After completing the First and Second Years a student may proceed to a Degree in Arts by pursuing any one of the following Courses, viz:

(a) A General Course.

(b) A Course in Classics.

(c) A Course in Modern Languages.

(d) A Course in Philosophy.

(e) A Course in Political Economy and History.

(f) A Course in English and History.

(g) A Course in Political Economy and English.

(h) A Course in History and French and German.

(i) A Course in Political Economy and French and German.

(j) A Course in Mathematics.

(k) A Course in Natural and Physical Science (Any one of four divisions).

GENERAL COURSE.

Third Year.

Note 1.—All English-speaking students shall take the following fixed subjects: English, Philosophy, Latin or Greek, Physics. And one of the following options: Greek or Latin (the one not already taken), French, German, Hebrew, Scripture, Mathematics.

Note 2.—French-speaking students will substitute French for English in the fixed subjects, and English for French in the optional subjects.

1. *English.* See Courses 3 and 4, pages 83 and 84.

2. *French.* (For French-speaking students.) See Course 7, page 90.

3. *Philosophy.* See Course 13, page 95.

4. *Philosophy.* (For French-speaking students.) See Course 9, page 96.

5. *Latin.*

   (a) Authors. See Course 13, page 81.

   (b) Sight Translation.

6. *Greek.*

   (a) Authors. See Course 15, page 81.

   (b) Sight Translation.

7. *Physics.* See Course 1, page 105.

8. *French.*

   (a) Composition.

   (b) Authors. See Course 4, page 89.

9. *English.* (For French-speaking students).

   (a) Composition.

   (b) Auteurs. See Course 10, page 87.

10. *German.*

   (a) Composition.

   (b) Authors. See Course 4, page 92.

11. *Hebrew.* See Course 1, page 82.

12. *Scripture* (English Text).

   (a) Old Testament. See Course 3, page 82.

   (b) New Testament. See Course 5, page 82.

13. *Mathematics.* See Course 6B, page 104.

Fourth Year.

Note 1.—All English-speaking collegiate students for this examination shall take the following fixed subjects: English, Philosophy, Latin or Greek, Science, and any one of the following options: Greek or Latin (the one not already taken), French, German, Hebrew, Political Economy, Scripture.

Note 2.—French-speaking students will substitute French for English in the fixed subjects, and English for French in the optional subjects.

Note 3.—Non-collegiate students shall take the following fixed subjects: English, Philosophy, Latin or Greek, and any two of the following options: Greek or Latin (the one not already taken), French, German, Hebrew, Political Economy, Scripture, Science.

1. *English.* See Courses 6 and 7, pages 85 and 86.

2. *French.* (For French-speaking students.) See Course 7, page 90.

3. *Philosophy.* See Course 13, page 95.

4. *Philosophy.* (For French-speaking students). See Course 9, page 96.

5. *Latin.*

(a) Authors. See Course 13, page 81.

(b) Sight Translation.

6. *Greek.*

(a) Authors. See Course 15, page 81.

(b) Sight Translation.

7. *Science.*

(a) Astronomy. See Course 20, page 104.

(b) Geology. See Course 1, page 112.

8. *French.*

(a) Composition.

(b) Authors. See Course 4, page 89.

9. *German.*

(a) Composition.

(b) Authors. See Course 4, page 92.

10. *Hebrew.* See Course 2, page 82.

11. *Political Economy.* See Course 3, page 101.

12. *Political Economy.* (For French-speaking students). See Course 10, page 96.

13. *Scripture.*

(a) Old Testament. See Course 3, page 82.

(b) New Testament. See Course 5, page 82.

COURSE IN CLASSICS

Third Year.

1. Greek History. See Course 9, page 80.

2. Roman History. See Course 11, page 80.

3. Epic Poetry. See Course 1, page 78.

4. Latin Prose.

5. Greek Prose.

6. Latin and Greek Sight Translation.

Also for Examination of 1911 and every alternate year thereafter:

7. Greek and Roman Comedy. See Course 4, page 79.

8. Roman Satire and Epigram. See Course 5, page 79.

9. Greek Antiquities.

Or for Examination of 1912 and every alternate year thereafter:

7. Greek Tragedy. See Course 2, page 78.

8. Latin Lyric Poetry. See Course 3, page 78.

9. Roman Antiquities.

Fourth Year.

1. Greek History. See Course 10, page 80.

2. Roman History. See Course 12, page 81.

3. Literary Criticism. See Course 6, page 79.

4. Greek Philosophy. See Course 7, page 80.

5. Roman Philosophy. See Course 8, page 80.

6. Latin Prose.

7. Greek Prose.

8. Latin and Greek Sight Translation.

Also for Examination of 1911 and every alternate year thereafter:

9. Greek and Roman Comedy. See Course 4, page 79.

10. Roman Satire and Epigram. See Course 5, page 79.

11. Greek Antiquities.

Or, for Examination of 1912 and every alternate year thereafter:

9. Greek Tragedy. See Course 2, page 78.

10. Latin Lyric Poetry. See Course 3, page 78.

11. Roman Antiquities.

COURSE IN MODERN LANGUAGES.

Third Year.

I. ENGLISH.

1. Chaucer and the Popular Ballad. See Course 1, page 82.

2. Spenser. See Course 2, page 83.

3. Milton. See Course 3, page 83.

4. Shakespeare. See Course 4, page 84.

5. History of Literature. See Course 8, page 86.

II. FRENCH.

(A) For 1911 and every alternate year thereafter:

1. Literary and Political History. See Course 6, page 90.

2. Authors. See Course 3, page 89.

3. Composition, Translation at Sight and Oral.

(B) For 1912 and every alternate year thereafter:

1. Literary and Political History. See Course 5, page 90.

2. Authors. See Course 2, page 88.

3. Composition, Translation at Sight and Oral.

III. GERMAN.

(A) For 1911 and every alternate year thereafter:

1. Literary and Political History. See Course 6, page 93.

2. Authors. See Course 4, page 92.

3. Composition, Sight Translation and Oral.

(B) For 1912 and every alternate year thereafter:

1. Literary and Political History. See Course 5, page 93.

2. Authors. See Course 2, page 91.

3. Composition, Sight Translation and Oral.

Fourth Year.

I. ENGLISH.

1. The Poetry of Wordsworth, Coleridge and Shelley. (See Course 5, page 84.

2. The Poetry of Tennyson and Browning. See Course 6, page 85.

3. Nineteenth Century Prose. See Course 7, page 86.

4. Literary and Political History. See Course 9, page 87.

II. FRENCH.

(A) For 1911 and every alternate year thereafter:

1. Literary and Political History. See Course 6, page 90.

2. Authors. See Course 3, page 89.

3. Composition, Translation at Sight and Oral.

(B) For 1912 and every alternate year thereafter:

1. Literary and Political History. See Course 5, page 90.

2. Authors. See Course 2, page 88.

3. Composition, Translation at Sight and Oral.

III. GERMAN.

(A) For 1911 and every alternate year thereafter:

1. Literary and Political History. See Course 6, page 93.

2. Authors. See Course 4, page 92.

3. Composition, Sight Translation and Oral.

(B) For 1912 and every alternate year thereafter:

1. Literary and Political History. See Course 5, page 93.

2. Authors. See Course 2, page 91.

3. Composition. Sight Translation and Oral.

A student in order to pass the examination of the Course in Modern Languages must obtain 40 per cent. of the aggregate marks given for all the papers of the course. Failing to obtain this percentage the student shall be required to again present himself for examination on all the subjects of the year, at a subsequent regular examination.

A student obtaining an average of 40 per cent. on the whole course, but failing to obtain 40 per cent. of the marks given for any one of the three languages, shall be required to write on all the papers of that language again; but a student obtaining more than 40 per cent. on the aggregate of the papers of any language and not obtaining 34 per cent. of the marks on any paper shall be required to write on such paper again.

The papers on Composition, etc., in both French and German, shall receive 60 marks for Grammar and Composition, 20 marks for Conversation, and 20 marks for Sight Translation.

In each year of this course three essays shall be written by each candidate; one on a subject connected with the work in English, one on a subject connected with the work in French, and one on a subject connected with the work in German. These essays are to be written in the University Building, in the presence of one examiner or more, and given to the Registrar. No student shall be allowed to write on the annual examination unless the essays have been passed by the examiners as "satisfactory."

Subjects of Essays for 1910-11:

English—

"The Literary Influence of Bishop Percy's 'Reliques of Ancient English Poetry.'"

Date: Tuesday, Nov. 29th, 1910, at 2 o'clock p.m.

French—

"A Comparison Between French and English Realism as Represented by Balzac and George Eliot."

Date: Tuesday, Jan. 17th, 1911, at 2 o'clock p.m.

German—

"A Comparison between Marlowe's Doctor Faustus and Goethe's Faust, Part I."

Date: Tuesday, March 7th, 1911, at 2 o'clock p.m.

COURSE IN PHILOSOPHY (ENGLISH)

Third Year.

1. History of Philosophy, Ancient and Mediæval. See Course 1, page 94.

2. Metaphysics—Locke and the transition through Berkeley to Hume. See Course 3, page 94.

Also for 1911 and every alternate year thereafter:

3. Ethics. See Course 8, page 95.

4. Political Science. See Course 10, page 95.

Or for 1912 and every alternate year thereafter:

3. Logic. See Course 6, page 94.

4. Psychology. See Course 7, page 94.

5. Metaphysics. See Course 4, page 94.

6. Political Science. See Course 11, page 95.

Fourth Year.

1. History of Philosophy, Modern. See Course 2, page 94.

2. Metaphysics. See Course 5 ,page 94.

3. Philosophy of Religion. See Course 9, page 95.

Also for 1911 and every alternate year thereafter:

4. Ethics. See Course 8, page 95.

5. Political Science. See Course 10, page 95.

Or for 1912 and every alternate year thereafter:

4. Logic. See Course 6, page 94.

5. Psychology. See Course 7, page 94.

6. Metaphysics. See Course 4, page 94.

7. Political Science. See Course 11, page 95.

COURSE IN PHILOSOPHY (LATIN)

Third Year.

(A) For the Examination of 1911 and every alternate year thereafter:

1. Philosophia Moralis. See Course 1, page 95.

2. Histoire de la Philosophie. See Course 5, page 96.

3. Economie Politique. See Course 6, page 96.

4. Chimie. See Course 7, page 96.

(B) For the Examination of 1912 and every alternate year thereafter:

1. Logica. See Course 2, page 95.

2. Metaphysica. See Course 3, page 96.

3. Histoire de la Philosophie. See Course 4, page 96.

4. Physique. See Course 8, page 96.

Fourth Year.

(A) For the Examination of 1911 and every alternate year thereafter:

1. Philosophia Moralis. See Course 1, page 95.

2. Histoire de la Philosophie. See Course 5, page 96.

3. Eonomic Politique. See Course 6, page 96.

4. Chimie. See Course 7, page 96.

B. For the examination of 1912 and every alternate year thereafter:

1. Logica. See Course 2, page 95.

2. Metaphysica. See Course 3, page 96.

3. Histoire de la Philosophie. See Course 4, page 96.

4. Physique. See Course 8, page 96.

COURSE IN POLITICAL ECONOMY AND HISTORY

Third Year.

I. POLITICAL ECONOMY.

1. Economic Theory. See Course 1A, page 98.

2. Economic History—Mediæval. See Course 1B, page 100.

II. HISTORY.

1. British Political History from the Roman Period to the Reform Bill. See Course 1A, page 97.

2. British Constitutional History from the Roman Period to the Reform Bill. See Course 1B, page 97.

Fourth Year.

I. POLITICAL ECONOMY.

1. Economic Theory. See Course 2A, page 101.

2. Economic History—Modern. See Course 2B, page 101.

II. HISTORY.

1. A period of General History. The period selected for 1910-11 is 1400-1600. See Course 2A, page 98.

2. A period of Canadian History. The period from which various phases will be selected for consideration during 1910-11 is 1763-1867. See Course 2B, page 98.

COURSE IN ENGLISH AND HISTORY.

Third Year.

I. ENGLISH.

1. Chaucer and the Popular Ballad. See Course 1, page 82.

2. Spenser. See Course 2, page 83.

3. Milton. See Course 3, page 83.

4. Shakespeare. See Course 4, page 84.

5. History of Literature. See Course 8, page 86.

II. HISTORY.

1. British Political History from the Roman Period to the Reform Bill. See Course 1A, page 97.

2. British Constitutional History from the Roman Period to the Reform Bill. See Course 1B, page 97.

Fourth Year.

I. ENGLISH.

1. The Poetry of Wordsworth, Coleridge and Shelly. (See Course 5, page 84.

2. The Poetry of Tennyson and Browning. See Course 6, page 85.

3. Nineteenth Century Prose. See Course 7, page 86.

4. Literary and Political History. See Course 9, page 87.

II. HISTORY.

1. A priod of General History. The period selected for 1910-11 is 1400-1600. See Course 2A, page 98.

2. A period of Canadian History. The period from which various phases will be selected for consideration during 1910-11 is 1763-1867. See Course 2B, page 98.

COURSE IN POLITICAL ECONOMY AND ENGLISH.

Third Year.

I. POLITICAL ECONOMY.

1. Economic Theory. See Course 1A, page 98.

2. Economic History. Mediaeval. See Course 1B, page 100.

II. ENGLISH.

1. Chaucer and the Popular Ballad. See Course 1, page 82.

2. Spenser. See Course 2, page 83.

3. Milton. See Course 3, page 83.

4. Shakespeare. See Course 4, page 84.

5. History of Literature. See Course 8, page 86.

Fourth Year.

I. POLITICAL ECONOMY.

1. Economic Theory. See Course 2A, page 101.

2. Economic History—Modern. See Course 2B, page 101.

II. ENGLISH.

1. The Poetry of Wordsworth, Coleridge and Shelley. See Course 5, page 84.

2. The Poetry of Tennyson and Browning. See Course 6, page 85.

3. Nineteenth Century Prose. See Course 7, page 86.

4. Literary and Political History. See Course 9, page 87.

COURSE IN HISTORY AND FRENCH AND GERMAN.

Third Year.

I. HISTORY.

1. British Political History from the Roman Period to the Reform Bill. See Course 1A, page 97.

2. British Constitutional History from the Roman Period to the Reform Bill. See Course 1B, page 97.

II. FRENCH.

(A) For 1911 and every alternate year thereafter:

1. Literary and Political History. See Course 6, page 90.

2. Authors. Course 3, page 89.

3. Composition, Sight Translation and Oral.

(B) For 1912 and every alternate year thereafter:

1. Literary and Political History. See Course 5, page 90.

2. Authors. See Course 2, page 88.

3. Composition, Sight Translation and Oral.

III. GERMAN.

(A) For 1911 and every alternate year thereafter:

1. Literary and Political History. See Course 6, page 93.

2. Authors. See Course 4, page 92.

3. Composition, Sight Translation and Oral.

(B) For 1912 and every alternate year thereafter:

1. Literary and Political History. See Course 5, page 93.

2. Authors. See Course 2, page 91.

3. Composition, Sight Translation and Oral.

Fourth Year.

I. HISTORY.

1. A period of General History. The period selected for 1910--11 is 1400-1600. See Course 2A, page 98

2. A period of Canadian History. The period from which various phases will be selected for consideration during 1910-11 is 1763-1867. See Course 2B, page 98.

II. FRENCH.

(A) For 1911 and every alternate year thereafter:

1. Literary and Political History. See Course 6, page 90.

2. Authors. See Course 3, page 89.

3. Composition, Sight Translation and Oral.

(B) For 1912 and every alternate year thereafter:

1. Literary and Political History. See Course 5, page 90.

2. Authors. See Course 2, page 88.

3. Composition, Sight Translation and Oral.

III. GERMAN.

(A) For 1911 and every alternate year thereafter:

1. Literary and Political History. See Course 6, page 93.

2. Authors. See Course 4, page 92.

3. Composition, Sight Translation and Oral.

(B) For 1912 and every alternate year thereafter:

1. Literary and Political History. See Course 5, page 93.

2. Authors. See Course 2, page 91.

3. Composition, Sight Translation and Oral.

COURSE IN POLITICAL ECONOMY AND FRENCH AND GERMAN.

Third Year.

I. POLITICAL ECONOMY.

1. Economic Theory. See Course 1A, page 98.

2. Economic History—Mediæval. See Course 1B, page 100.

II. FRENCH.

(A) For 1911 and every alternate year thereafter:

1. Literary and Political History. See Course 6, page 90.

2. Authors. See Course 3, page 89.

3. Composition, Sight Translation and Oral.

(B) For 1912 and every alternate year thereafter:

1. Literary and Political History. See Course 5, page 90.

2. Authors. See Course 2, page 88.

3. Composition, Sight Translation and Oral.

III. GERMAN.

(A) For 1911 and every alternate year thereafter:

1. Literary and Political History. See Course 6, page 93.

2. Authors. See Course 4, page 92.

3. Composition, Sight Translation and Oral.

(B) For 1912 and every alternate year thereafter:

1. Literary and Political History. See Course 5, page 93.

2. Authors. See Course 2, page 91.

3. Composition, Sight Translation and Oral.

Fourth Year.

I. POLITICAL ECONOMY.

1. Economic Theory. See Course 2A, page 101.

2. Economic History—Modern. See Course 2B, page 101.

II. FRENCH.

(A) For 1911 and every alternate year thereafter:

1. Literary and Political History. See Course 6, page 90.

2. Authors. See Course 3, page 89.

3. Composition, Sight Translation and Oral.

(B) For 1912 and every alternate year thereafter:

1. Literary and Political History. See Course 5, page 90.

2. Authors. See Course 2, page 88.

3. Composition, Sight Translation and Oral.

III. GERMAN.

(A) For 1911 and every alternate year thereafter:

1. Literary and Political History. See Course 6, page 93.

2. Authors. See Course 4, page 92.

3. Composition, Sight Translation and Oral.

(B) For 1912 and every alternate year thereafter:

1. Literary and Political History. See Course 5, page 93.

2. Authors. See Course 2, page 91.

3. Composition, Sight Translation and Oral.

COURSE IN MATHEMATICS.

Third Year.

1. Higher Algebra and Theory of Equations. See Course 12, page 103.

2. Plane and Spherical Trigonometry. See Course 13, page 103, and Course 5B, page 104.

3. Solid Analytical Geometry. See Course 14, page 104.

4. Infinitesimal Calculus. See Course 6B, page 104.

5. Physics. See Course 2, page 107.

6. Physics. See Course 6, page 108.

7. Problems on 1, 2, 3, 4, 6.

Fourth Year.

1. Differential Calculus. See Course 15, page 104.

2. Integral Calculus. See Course 16, page 104.

3. Differential Equations. See Course 17, page 104.

4. Analytical Statics. See Course 18, page 104.

5. Particle Dynamics. See Course 19, page 104.

6. Physics. See Course 3, page 107.

7. Physics. See Course 7, page 107.

8. Astronomy. See Course 20, page 104.

9. Problems on 1, 2, 3, 4, 5, 7.

COURSES IN NATURAL AND PHYSICAL SCIENCE.

DIVISION A.

Third Year.

1. Mathematics.
2. Physics.
3. Chemistry.
4. Geology and Mineralogy.

Fourth Year.

1. Mathematics.
2. Physics.
3. Chemistry.
   or Geology and Mineralogy.

DIVISION B.

Third Year.

1. Mathematics.
2. Chemistry.
3. Physics.
4. Astronomy.

Fourth Year.

1. Mathematics.
2. Physics.
3. Astronomy.

DIVISION C.

Third Year.

1. Physics.

2. Chemistry.
3. Botany.
4. Geology and Mineralogy.

Fourth Year.

1. Physics.
2. Chemistry.
3. Botany.

   or Geology and Mineralogy.

DIVISION D.

Third Year.

1. Physics.
2. Chemistry.
3. Botany.
4. Physiology.

Fourth Year.

1. Physiology.
2. Chemistry.
3. Physics.

   or Botany.

NOTE.—The scope of the work in the various subjects of the above courses is not as yet fully outlined. The student intending to enter upon the work of the Third Year in any of them would do well to consult at as early a date as possible the professors in charge of the various subjects required.

Instead of the courses in Natural and Physical Science, as outlined above for the Fourth Year, the following will be given in 1910-11:

1. Chemistry—

   (a) Inorganic.

(b) Organic. See Course 3, page 114.

(c) Practical Chemistry. See page 115.

3. Botany. See Course 2, page 111.

4. Any two of the following:

(a) Geology. See page 112.

(b) Astronomy. See Course 20, page 104.

(c) Physiology, as for Second Year students in Medicine. See pages 116-118, 120 and 121.

No student shall be allowed to take any Third or Fourth Year examination in the courses in Natural and Physical Science who does not present from the Faculty of the University, or from an affiliated College of the University, where such work is done in the college, a certificate of having attended 75 per cent. of the lectures delivered in each subject of such course.

DEPARTMENT OF CLASSICS.

Instruction in this Department is provided only in the affiliated Colleges.

N.B.—The content of the collateral reading will enter into the examination.

1. *Epic Poetry.*

HOMER: Iliad, Books VI., IX., XVIII., XXII., XXIV. Odyssey, Books VII.-XII.

VERGIL: Aeneid, Books I., IV.-VIII.

Collateral Reading—

JEBB: Introduction to Homer.

SELLAR: Roman Poets of the Augustan Age—Vergil, cc. 8, 9, 10, 11.

2. *Greek Tragedy.*

AESCHYLUS: Prometheus Vinctus.

SOPHOCLES: Oedipus Tyrannus, Antigone, Philoctetes.

Collateral Reading—

BARNETT: Greek Drama, cc. 1, 2, 3 (Temple Primers).

MOULTON: Ancient Classical Drama, cc. 1, 3.

JEBB: Classical Greek Poetry, cc. 6, 7.

3. *Latin Lyric Poetry.*

HORACE: Odes.

CATULLUS: Selections (Simpson).

Collateral Reading—

SELLAR: Roman Poets of the Republic, c. 15.

Roman Poets of the Augustan Age—Horace, cc. 1, 6.

SHOREY: Odes and Epodes of Horace; The Introduction. (Sanborn, Boston).

4. *Greek and Roman Comedy.*

ARISTOPHANES: Birds, Clouds.

TERENCE: Andria.

PLAUTUS: Trinummus.

Collateral Reading—

MOULTON: Ancient Classical Drama, cc. 7, 8, 9, 11.

JEBB: Classical Greek Poetry, c. 7.

SELLAR: Roman Poets of the Republic, cc. 6, 7.

5. *Roman Satire and Epigram.*

HORACE: Satires, I., omitting 2 and 8.

Satires, II., 1, 2, 5, 6.

JUVENAL: Satires, I, 3, 5, 7, 8, 10.

MARTIAL: Post's Selections, Books I.-IV.

Collateral Reading—

SELLAR: Roman Poets of the Augustan Age, Horace, cc. 1, 2.

DILL: Roman Society from Nero to Marcus Aurelius, cc. 1, 2. (The Macmillan Co.)

BOISSIER: The Poet Martial, from "Tacitus and other Roman Studies." (Constable, London.)

6. *Literary Criticism.*

ARISTOTLE: Poetics. (Butcher.)

HORACE: De Arte Poetica.

QUINTILIAN: Book X.

Collateral Reading—

BUTCHER: Aristotle's Theory of Poetry and Fine Art; The Essays.

7. *Greek Philosophy.*

PLATO: Republic, I.—IV., X.
Phaedo.

Collateral Reading—

JOWETT: Introductions to Republic and Phaedo.

8. *Roman Philosophy.*

CICERO: De Officiis.
LUCRETIUS: De Rerum Natura, I., III., V.

Collateral Reading—

MAYOR: Ancient Philosophy.

9. *Greek History.* 500 B.C. to 431 B.C.

(a) HOLM: History of Greece, Vol. II., cc. 1-21.
(b) HERODOTUS: VII.-IX.
THUCYDIDES: I.

10. *Greek History.* 431 B.C. to 338 B.C.

(a) HOLM: History of Greece, Vol II., c. 22, to Vol. III., c. 19.

(b) THUCYDIDES: II., VI., VII.
DEMOSTHENES: Philippic I.
Olynthiacs.
ARISTOTLE: Constitution of Athens.

11. *Roman History.* 146 B.C. to 50 B.C.

(a) HOW AND LEIGH: History of Rome.

PELHAM: Outlines of Roman History, Book III., c. 3, Book IV.

(b) CICERO: Select Letters, Watson, Parts 1, 2.
SALLUST: Catiline.

12. *Roman History.* 49 B.C. to 37 A.D.

(a) MOMMSEN: Book V., c. 9 to end.
SHUCKBURGH: Augustus.

(b) CICERO: Select Letters—Watson. Parts 3, 4, 5. Philippic II.
CAESAR: Civil War, I., 1—29; III.
MONUMENTUM ANCYRANUM.
TACITUS: Annals, I., II.

13. CICERO: Cicero in his Letters, I.—XL. (Tyrrell, Macmillan & Co.)

PLAUTUS: Captivi and Trinummus. (Morris, Ginn & Co.)

14. HORACE: Satires, Book I., 1, 3, 4, 5, 6, 9, 10. (Gow, Pitt Press.)
TACITUS: Annals I. and II. (Furneaux, Clarendon Press).

15. DEMOSTHENES: Olynthiacs I.-III. (Glover, Pitt Press)
HOMER: Odyssey, Books XXII.-XXIV. (Merry, Clarendon Press.)
GOSPEL OF MARK: (Cambridge Greek Testament.)
HERODOTUS: Book VI. (Strachan, Macmillan & Co.)

16. THUCYDIDES: Book II. (Marchant, Macmillan & Co.)
ARISTOPHANES: CLOUDS. (Merry, Clarendon Press.)
EPISTLE TO THE HEBREWS. (Cambridge Greek Testament.)
AESCHYLUS: Prometheus Vinctus. (Mather, Allyn & Bacon.)

DEPARTMENT OF HEBREW AND SCRIPTURE.

Instruction in this Department is provided only in the affiliated Colleges.

1. *Hebrew Grammar*: DAVIDSON (to end of regular verbs); or HARPER.
2. *Hebrew Grammar*: DAVIDSON (completed); or HARPER.
3. *Old Testament*: Proverbs, Nahum, Habakkuk, Zephaniah, Obadiah (Cambridge Bible).
4. *Old Testament*: Psalms I., II., VIII., XIX., XX., XXII., XXIII., XXIV., XXVI., XXIX., XXXVI., Haggai, Zechariah, Malachi (Cambridge Bible).
5. *New Testament*: Ephesians and Galatians (Cambridge Bible).
6. *New Testament*: James, Peter and Jude (Cambridge Bible).

DEPARTMENT OF ENGLISH.

ALEXANDER W. CRAWFORD, M.A., PH.D.....*Professor*

Instruction in this Department is provided also in the affiliated Colleges.

1. Chaucer and the Popular Ballad.

CHAUCER:—

The Prologue to the Canterbury Tales.
Nonne Priestes Tale.
Prioresses Tale.
(Two volumes in the edition of Morris and Skeat, Clarendon Press.)
The Ballads contained in "A Ballad Book," edited by Katharine Lee Bates.

Collateral Reading.

(NOTE.—*This is to be read concurrently with the above. The content of it will enter into the examination.*)

CHAUCER, by A. W. Pollard.

Chapters I., VI., VIII., in T. R. Lounsbury's Studies in Chaucer.

Article on The Ballad in the Encyclopædia Britannica.

The following ballads (for purposes of comparison) by modern poets:—

Longfellow's The Wreck of the Hesperus, and The Skeleton in Amour.

D. G. Rossetti's Sister Helen.

Kipling's The Gift of the Sea.

2. Spenser.

Edmund Spenser:—

Astrophel.

The Faerie Queene. Book I.

An Hymne in Honor of Beautie.

An Hymne of Heavenly Beautie.

The Epithalamion.

(Macmillan's one-volume edition of Spenser's poems is recommended.)

Collateral Reading.

(Note.—*This is to be read concurrently with the above. The content of it will enter into the examination.*)

Life of Spenser, by Dean Church.

Spenser, the Poet and Teacher, and Heroines of Spenser in Dowden's Transcripts and Studies.

3. Milton.

John Milton:—

The Sonnets.

L'Allegro, and Il Penseroso.

Paradise Lost, Books I.-III.

The Prose of Milton, edited by Dr. Richard Garnett.

Collateral Reading.

(NOTE.—*This is to be read concurrently with the above. The content of it will enter into the examination.*)

Life of Milton, by MARK PATTISON.

Essay on Milton by EDWARD DOWDEN in Transcripts and Studies.

4. SHAKESPEARE:—

As You Like It.
Henry V.
Antony and Cleopatra.
Othello.

Collateral Reading.

(NOTE.—*This is to be read concurrently with the above. The content of it will enter into the examination.*)

A Life of William Shakespeare, by SIDNEY LEE.

5. The Poetry of Wordsworth, Coleridge and Shelley.

WILLIAM WORDSWORTH:—

We are Seven, Lucy Gray, The Pet Lamb, Ruth, Hart-Leap Well, The Affliction of Margaret, The Leech-Gatherer, The Brothers, My Heart Leaps Up, To the Daisy, Three Years She Grew in Sun and Shower, To the Cuckoo, She Was a Phantom of Delight, To a Highland Girl, Stepping Westward, The Solitary Reaper, Character of the Happy Warrior, Ode on Intimations of Immortality, Influence of Natural Objects, Lines Composed a Few Miles Above Tintern Abbey, The French Revolution (as it appeared to enthusiasts at its commencement), Nutting, To Mary Wordsworth.

SAMUEL TAYLOR COLERIDGE:—

The Poems contained in "The Golden Book of Coleridge" (edted by Stopford A. Brooke and pubilished by J. M. Dent & Co.)

PERCY BYSSHE SHELLEY:—

Ozymandias, Lines Written Among the Euganean Hills, Stanzas Written in Dejection Near Naples, Ode to the

West Wind, To a Skylark, The Cloud, A Lament: O World, O Life, O Time; Adonais, Epipsychidion.

Collateral Reading.

(NOTE.—*This is to be read concurrently with the above. The content of it will enter into the examination.*)

F. W. H. MYERS, Wordsworth.

MATTHEW ARNOLD, Essay on Wordsworth (Preface to Selections in the "Golden Treasury" Series.)

H. D. TRAILL, Coleridge.

J. A. SYMONDS, Shelley.

6. The Poetry of Tennyson and Browning.

ALFRED LORD TENNYSON:—

The Lady of Shallott, Sir Galahad, The Epic; and the following *Idylls*: The Coming of Arthur, Lancelot and Elaine, The Holy Grail, The Last Tournament, Guinivere, The Passing of Arthur.

In Memoriam.

Œnone, Ulysses, Lucretius.

St. Simon Stylites.

Becket.

"You ask me why, tho' ill at ease," "Love thou thy Land."

ROBERT BROWNING:—

My Last Duchess, The Flight of the Duchess, The Lost Leader, The Last Ride Together, By the Fireside, The Statue and the Bust, Pictor Ignatus, Fra Lippo Lippi, Andrea del Sarto, The Bishop Orders His Tomb at St. Praxed's, A Toccatto of Galuppi's, Abt Vogler, Prospice, "Childe Roland to the Dark Tower Came," A Grammarian's Funeral, An Epistle Containing the Strange Medical Experience of Karshish, the Arab Physician, Caliban upon Setebos, Saul, Rabbi Ben Ezra, Confessions, In a Balcony, Old Pictures in Florence.

(The above poems are all contained in an edition published by Thomas Y. Crowell & Co.)

Collateral Reading.

(NOTE.—*This is to be read concurrently with the above. The content of it will enter into the examination.*)

STOPFORD A. BROOKE, Tennyson, His Art and Relation to Modern Life.

WILLIAM SHARP, Robert Browning.

7. Nineteenth Century Prose.

GEORGE ELIOT:—

Scenes of Clerical Life.

Adam Bede.

WILLIAM MAKEPEACE THACKERAY:—

Vanity Fair.

JOHN RUSKIN:—

The Crown of Wild Olive.

Unto This Last.

Collateral Reading.

(NOTE.—*This is to be read concurrently with the above. The content of it will enter into the examination.*)

LESLIE STEPHEN, George Eliot.

ANTHONY TROLLOPE, Thackeray.

FREDERIC HARRISON, Ruskin.

8. History of Literature.

(a) History of English Literature.

STOPFORD BROOKE's Primer of English Literature (to be read down to the period of Elizabeth).

Elizabethan Literature, by PROFESSOR GEORGE SAINTSBURY.

(b) History, Social and Political.

The Age of Elizabeth, by M. CREIGHTON (Epochs of Modern History Series, Longmans).

The Reformation in England, by G. C. PERRY (Epochs of Church History Series, Longmans).

The First Two Stuarts and the Puritan Revolution, by S. R. GARDINER (Epochs of English History, Longmans).

9. Literary History (Nineteenth Century).

Beginnings of the English Romantic Movement, by W. L. PHELPS.

History of the Literature of the Nineteenth Century, by PROF. GEORGE SAINTSBURY.

10. *Auteurs*—

WORDSWORTH: Excursion, Book I.
IRVING: Sketch Book (six Essays).

DEPARTMENT OF FRENCH.

Instruction in this Department is provided only in the affiliated Colleges.

1. Authors.

RACINE:—

Phèdre.

MOLIÈRE:—

Les Précieuses Ridicules.

Le Médecin Malgré Lui.

La Société Française au Dix-Septième Siècle, by Prof. T. F. Crane.

2. Authors.

Racine:—

Andromaque.

Phèdre.

Molière:—

Tartuffe.

Les Précieuses Ridicules.

Le Médecin Malgré Lui.

Le Malade Imaginaire.

L'Ecole des Femmes.

Bossuet:—

Oraisons Funèbres (in edition of Hachette et Cie, edited by C. Aubert).

Madame de Sévigné:—

Choix de Lettres (Didot edition).

Collateral Reading.

(Note.—*This is to be read concurrently with the above. The content of it will enter into the examination.*)

Article on Racine in the Encyclopædia Britannica.

Article on Molière in the Encyclopædia Britannica.

Essays on Fénélon, Bossuet, Massillon in Monday Chats, by Sainte-Beuve (translation by Dr. Wm. Matthews).

Madame de Sévigné, by Gaston Boissier (in Great French Writers Series).

Essay on Literary Influence of Academies, by Matthew Arnold (in Essays in Criticism, First Series).

Madame de Maintenon, by J. Cotter Morrison

3. Authors.

Rousseau :—

Le Contrat Social.

Madame de Staël :—

De l'Allemagne (Didot edition).

Victor Hugo :—

Préface de Cromwell. (Scott, Foresman & Co.)

Hernani. (Scott, Foresman & Co.)

Quatre-vingt-treize. (Ginn & Co.)

Les Chants du Crépuscule.

Balzac :—

Le Père Goriot. (Heath & Co.)

Le Cousin Pons. (Holt & Co.)

Le Chef d'Oeuvre Inconnu.

Le Médecin de Campagne.

Collateral Reading.

(Note.—*This is to be read concurrently with the above. The content of it will enter into the examination.*)

Victor Hugo, by F. T. Marzials (Great Writers' Series).

Balzac, by E. E. Saltus.

4. Authors.

Victor Hugo :—

Hernani.

Quatre-vingt-treize.

BALZAC:—

Le Médecin de Campagne.

5. Literary and Political History.

(a) History of French Literature in the 17th Century.

SAINTSBURY'S Primer of French Literature, published by Clarendon Press (to the 17th Century).

SAINTSBURY'S Short History of French Literature (5th edition, Book 3, pp. 246-366. (Clarendon Press).

Chapter I. of PELLISSIER'S The Literary Movement in France during the Nineteenth Century. (This chapter is on Classicism.)

(b) History of France in the 17th Century. *To form an idea of the earlier portion of French History the student will be expected to read the following:*

Historical Primer of France, by CHARLOTTE M. YONGE.

DURUY'S History of France, abridged and translated by Mrs. Carey, pp. 377-479.

Richelieu, by GUSTAVE MASSON.

La Société Française au Dix-Septième Siècle, by PROF. T. F. CRANE.

6. Literary and Political History.

(a) History of French Literature in the 19th Century.

PELLISSIER'S The Literary Movement in France during the Nineteenth Century.

(b) History of France. Period: The Revolution and the 19th Century.

The French Revolution, by C. E. MALLET (Scribners)

Napoleon, in the Heroes of the Nations Series, by W O'CONNOR MORRIS (Putnam).

7. *Auteurs*—

MOLIÈRE: L'Avare.
CORNEILLE: Horace.
RACINE: Les Plaideurs.
VEREST: Littérature.

8. *Auteurs*—

BOILEAU: Satires.
RACINE: Iphigénie.
LA COUTURE: Esthétique Fondamentale.

DEPARTMENT OF GERMAN.

Instruction in this Department is provided only in the affiliated Colleges.

1. Authors.

LESSING: Emilia Galotti.

GOETHE: Egmont.

Life of Lessing, by ROLLESTON.

2. The Life and Writings of Klopstock, Lessing and Goethe (to 1788), with special reference to the following works:

(a) KLOPSTOCK:—

Messias, Cantos I, II, III.

Oden: Die Stunden der Weihe, Der Zürchersee, Die Königin Luise, Die beiden Musen, Der Rheinwein, Der Eislauf, Der Jüngling, Schlachtlied, Hermann, Mein Vaterland. (Cotta'sche Buchhandlung.)

(b) LESSING:—

Emilia Galotti. (Heath & Co.)

Hamburgische Dramaturgie (selections). (Göschen Verh.)

Laokoon (selections). (Oxford Univ. Press.)

Nathan der Weise. (Amer. Book Co.)

(c) GOETHE:—

Leiden des Jungen Werthers.

Götz von Berlichingen.

Egmont.

Lyrics. (Ed. Harris, Heath & Co.)

Collateral Reading.

(NOTE—*This is to be read concurrently with the above. The content of it will enter into the examination.*)

Life of Frederick the Great, by A. L. SMITH.

A History of German Literature, by FRANCKE.

Lessing, by ROLLESTON.

Goethe, by LEWES.

Essays on German Literature, by BOYESEN.

3. Authors.

SCHILLER:—

Wallensteins Tod (Holt & Co.).

GOETHE:—

Hermann und Dorothea (Ginn & Co.).

HEINE:—

Prosa (Clarendon Press).

The following selections:—Die Harzreise, Das Buch le Grand, Englische Fragmente, Der Rabbi von Bacharach, Luther, Lessing, Die Romantische Schule.

4. The Life and Writings of Goethe (1788-1832), Schiller (1788-1805), Heine, Hauptmann and Sudermann, with special reference to the following works:

GOETHE:—

Faust, Part I. (Heath & Co.)

Dichtung und Wahrheit. (Ed. Jagemann, Holt & Co., pp. 1-62 and 213-277.)

Tasso (Heath & Co.).

Hermann and Dorothea (Heath & Co.).

SCHILLER:—

Wallensteins Tod (Holt & Co.).

Lyrical Poems (Ed. Turner and Morshead, Macmillan & Co.), pp. 35-109.

HEINE:—

Lyrics (Heath & Co.)

Prosa (Clarendon Press). The following selections: Die Harzreise, Das Buch le Grand, Englische Fragmente, Der Rabbi von Bacharach, Luther, Lessing, Die Romantische Schule.

HAUPTMANN:—

Die Versunkene Glocke (Holt & Co.).

SUDERMANN:—

Die Heimat.

Collateral Reading.

(NOTE—*This is to be read concurrently with the above. The content of it will enter into the examination.*)

Bismarck and His Time, by SIME.

A History of German Literature as Determined by Social Forces, by FRANCKE.

Schiller, by NEVINSON.

Goethe, by LEWES.

5. The Literary and Political History of Germany, as follows:

(a) The History of German Literature from the beginning to 1788, based upon Robertson's History of German Literature, etc.

(b) The Political History of Germany from the beginning to 1788, based upon Henderson, A Short History of Germany.

6. The Literary and Political History of Germany, as follows:

(a) The History of German Literature from 1788 to 1900, based upon Robertson, A History of German Literature.

(b) The Political History of Germany from 1788 to 1900, based upon Henderson, A Short History of Germany.

DEPARTMENT OF PHILOSOPHY (ENGLISH).

Instruction in this Department is provided only in the affiliated Colleges.

1. *History of Philosophy*—Ancient and Mediæval. (WEBER, Parts I. and II.).

2. *History of Philosophy*—Modern. (WEBER, Part III.).

3. *Metaphysics*—Locke and the transition through Berkeley to Hume.

   LOCKE: Essays, Book II.

   BERKELEY: Selections, ed. Fraser.

   HUME: Selections, ed. Aikins.

4. *Metaphysics*—

   JANET: Final Causes.

   McKENZIE: Outlines of Metaphysics.

5. *Metaphysics*—

   KANT: Critique of Pure Reason.

6. *Logic*—

   CREIGHTON: Parts II. and III.

   MILL: Logic.

7. *Psychology*—

   STOUT: Manual of Psychology.

8. *Ethics*—

PLATO: Republic.

ARISTOTLE: Ethics.

MCKENZIE: Ethics.

GREEN: Prolegomena to Ethics.

9. *Philosophy of Religion*—

JOHN CAIRD: Introduction to the Philosophy of Religion.

10. *Political Science*—

MILL: Political Economy.

WALKER: Political Economy.

BAGEHOT: English Constitution.

11. *Political Science*—
BOSANQUET: Philosophical Theory of the State.

12. MCKENZIE: Metaphysics.
STOUT: Psychology.

13. MCKENZIE: Ethics.
PLATO: Republic.

DEPARTMENT OF PHILOSOPHY (LATIN).

Instruction in this Department is provided only in St. Boniface College.

1. *Philosophia Moralis*—

RUSSO.
MONSABRÉ—Radicalisme contre Radicalisme.
COUSIN—Du Vrai, du Beau et du Bien.
BRUNETIÈRE—Discours de Combat.

2. *Logica*—RUSSO.

3. *Metaphysica*—
   Russo.
   Fénélon—Traité de l'existence de Dieu.
   Pascal—Pensées.
   Monsabré—Oeuvre de Dieu.

4. *Histoire de la Philosophie*—
   Valet (Première et Deuxième Partie).

5. *Histoire de Philosophie*—
   Valet (Troisième Partie).

6. *Économie Politique*—

   Hervé-Bazin—Traité d'Économie Politique.

   Molinari—Questions économiques.

   Cathrein—Le Socialisme.

7. *Chimie*—Bazin ou Remsen.

8. *Physique*—Bazin ou Gage.

9. (a) Fonsegrive: Logique.
   (b) Fonsegrive: Métaphysique.

10. *Économie Politique*—
    Hervé-Bazin: Traité d'Economie Politique.
    Conférences du Juge Dubuc sur la constitution Britannique.

DEPARTMENT OF HISTORY.

Chester Martin, B.A. (Oxon.), Professor.

The various periods to be taken up in the two years of the Special Course in History will be covered by regular lectures, supplemented by tutorial work with small groups of students. These groups will prepare essays twice a week to be read and discussed with the Professor in charge. The subjects of the essays will cover as far as possible the chief problems of the period under consideration.

The courses for the year 1910-11 will be as follows:

1. The Third Year class will cover British Political and Constitutional History from the Roman Period to the Reform Bill, with a few special lectures and essays on some of the chief problems of the present time.

A. For the Political History of the period, students will be expected to have a reading knowledge of Green's "Short History of the English People," or of York-Powell and Tout's small "History of England." For the actual work of the session, however, they will be referred to less elementary books on special subjects and periods, such as, for instance, Freeman's "Norman Conquest," Vinogradoff's "Manor and Villeinage in England," Gardiner's "History of England, 1603-1642, etc.," Ranke's "History of England, Principally in the Seventeenth Century," Seeley's "Expansion of England" and "Growth of British Policy," the "Political History of England" Series, edited by Poole (Longmans, Green & Co.), and the six-volume work edited by Oman (Methuen & Co.). Students of the Third Year would do well during the summer vacation to read Davis' "England under the Normans and Angevins," in the Methuen series, and Fisher's "Political History of England, 1485-1547," in the Longmans series, in connection with Green or York-Powell and Tout.

B. In the study of the Constitutional History of the period, special emphasis will be placed upon the evolution of principles of Parliamentary representation and upon the development and centralization of law and of the administration of justice. The documentary ground work for lectures and essays will be found in Stubb's "Select Charters," Stubb's "Constitutional History of England, Prothero's "Statutes and Constitutional Documents, 1559-1625," Gardiner's "Constitutional Documents of the Puritan Revolution, 1628-1660," Robertson's "Select Statutes, Cases and Documents, 1660-1832," with "Supplement 1832-1894," and Dicey's "Law of the Constitution." These volumes will not be used as text-books in the ordinary sense of the word, except where definite references are given for special reading in the lectures or essay work of the year. Students should possess the first two, however, and should master the introduction of Prothero and Gardiner.

2. The course for the Fourth Year will comprise a period of General History, and special phases in a period of Canadian History.

A. The period of General History for the year 1910-11 will be 1400 to 1600. The following books will be among those particularly recommended as sources of useful information for the period:

(i.) "Cambridge Modern History, Vols. I., II. and III.
(ii.) Lavisse, "Histoire de France."
(iii.) Lodge, "Modern Europe."
(iv.) Kitchin, "History of France."
(v.) Lavisse et Rambaud, "Histoire Générale."
(vi.) Ranke, "Latin and Teutonic Nations."*
(vii.) Ranke, "History of the Reformation."
(viii.) Pastor, "History of the Popes."
(ix.) Creighton, "History of the Papacy."*
(x.) Armstrong, "Charles V."
(xi.) Armstrong, "Lorenzo de' Medici."*
(xii.) Horatio Brown, "Venice."
(xiii.) Johnson; "Europe in the Sixteenth Century."*
(xiv.) Machiavelli, "The Prince."
(xv.) Philippe de Comines, "Mémoires."

B. The period of Canadian History from which various phases will be selected for consideration is 1763 to 1867. The chief sources for the study of this period are:

(i.) Shortt and Doughty's "Selection of Constitutional Documents, 1763-1791." (Report of Canadian Archives, 1905.)

(ii.) Egerton and Grant.

(iii.) Shortt and Doughty's "Selection of Constitutional Documents, 1791-1840" (in process of compilation).

Books of reference such as Lucas, Egerton, Garneau, McMullen, Kingsford, etc., will be recommended as the occasion for using them arises.

DEPARTMENT OF POLITICAL ECONOMY.

ARCH. BROWN CLARK, M.A. (Edin.), Professor.

1. The course in Political Economy for students of the Third Year, in 1910-11, will be as follows:

The lectures will include a discussion of the leading principles of Political Economy, together with the chief landmarks in

* Books marked thus, Fourth Year students are advised to read during the summer vacation.

the history of Economic Theory, and the outlines of Economic History—Mediæval.

A. Economic Theory.

1. *Introductory.*—Preliminary Definition of Political Economy; Wealth—Explication of the Conception; Character and Scope of the Science; Methods of Investigation; Economic Laws; Relation of Economic Science to Practice; Departments of the Science, and Principles of Classification.

2. *Consumption.*—Human Wants in Relation to Activities; Law of Diminishing Utility; Total and Marginal Utility; Influence of the Conception of Marginal Utility on the Development of Economic Theory; Law of Demand; Elasticity of Demand; Changes in Demand; Present and Future Utilities; Luxury; Saving *versus* Spending; Family Budgets; Value and Utility; Theory of Consumers' Surplus.

3. *Production.*—Its Essence; Its Relation to Consumption; History of the Theory of Production—the Physiocrats; Material and Immaterial Production; Agents of Production—Nature, Labor, Capital; Causes Determining the Productiveness of Industry: (1) Constituents of Natural Environment, (2) Causes Affecting Efficiency of Labor (a) Individual Efficiency, (b) Organization of Industry; Localization of Industry; Production on a Large and on a Small Scale; Joint-Stock Companies; Laws of Diminishing and Increasing Return; Principle of Population; Growth of Material Capital.

4. *Distribution.*—Meaning of the Term; Character of the Laws of Distribution; Private Property in Its Economic Aspects; Property in Land; Socialism; The Three Species of Income— (1) Wages: *Real* and *Nominal* Wages, The General Rate of Wages, Historical Theories, Differences of Wages in Different Employments, Influence of Trade Unions on Wages; (2) Interest—Its Nature and Determining Causes; Profits—Analysis, How far a Tendency to Equality of Profits; (3) Rent—Uses of the Term, Economic Rent: The Ricardian Theory.

5. *Exchange.*—Theory of Value—Value and Price; Laws of Demand and Supply; Market Value; Normal Value; Cost of Production; Relation of Rent to Value; Monopoly Value; Money—Its Functions; Standard and Token Money; Mint Price and Market Price of Gold; Gresham's Law; Money and

Prices—The Quantity Theory; Inconvertible Paper Currency; Credit—Its Forms and Its Basis; Banking—Its Historical Development, Regulation of the Bank Note Issues, Deposit Banking, The Money Market, The Reserve, The Rate of Discount; The Foreign Exchanges; Commercial Crises; Theory of International Trade and International Values; Free Trade and Protection.

Historical Evolution of the Theory of International Trade:—The Mercantile System, Adam Smith and the System of Natural Liberty. List and Modern Protectionist Theory.

B. Economic History—(Mediæval).

The Scope and Method of Economic History and its relation to Economic Theory; The Village Community; The Manor; Transition from Natural to Money Economy and Decay of Serfdom; The Black Death; The Statutes of Laborers; The Peasant Revolt; The Economic Condition of the Laborer in the Fifteenth Century and Now; The Origin and Growth of the Poor Law.

The Mediæval Town; The Gild Merchant; The Craft-Gilds—growth and decay; The Usury Laws; Mediæval and Modern Prices—Just and Normal.

The Mediæval Tax System; Growth of Foreign Trade; Mediæval Protection; Origins of the Mercantile System; Foreign Trade Companies; History of English Currency.

Text Books:—In connection with, and in amplification of, the lectures, the student will be expected to read: H. R. Seager, "Introduction to Economics" (except chapters 27, 28); J. S. Mill, "Principles of Political Economy," Ashley's edition, Books I to III (the parts referred to in the Lectures); Adam Smith, "Wealth of Nations," Book IV. (and other parts referred to in the Lectures), together with J. S. Nicholson, "A Project of Empire"; C. F. Bastable, "Theory of International Trade"; H. O. Meredith, "Economic History of England," Books I and II.

Reference will also be made to Cunningham's "Growth of English Industry and Commerce," Vol I.; Seebohm's "English Village Community"; Vinogradoff's "Growth of the Manor"; Marshall's "Principles of Economics"; and other works—all of which may be obtained from the Class Library.

2. The course in Political Economy for students of the Fourth Year, in 1910-11, will be as follows:—

A. Economic Theory.

(1) A discussion of some of the more difficult problems in Economic Theory, and the History of Theory, not dealt with in Course I.

(2) A critical study of Marshall's treatment of Economic Theory.

(3) A Survey of Economic Progress.

(4) The Economic Functions of the State; Public Finance —Taxation and Public Expenditure.

B. Economic History—Modern.

The Rise of Nationalists; The Elizabethan Regulation of Industry and Commerce; Seventeenth Century Monopolies and Modern Trusts; The Factory System and Factory Legislation; Trade Unionism; Socialism.

British Foreign Trade Companies; Colonization and Colonial Policy, Fiscal and Financial Reforms of the Nineteenth Century; History of Banking and Currency.

Text Books:—In connection with the lectures, the student will be expected to read: Marshall, "Principles of Economics," Vol. I.; J. W. Jenks' "The Trust Problem"; Nicholson, "Principles of Political Economy," Vol. III.; Adam Smith, "Wealth of Nations," Book V.; J. S. Mill, "Principles of Political Economy," Book V.; Bastable, "Public Finance"; Meredith, "Economic History," Books III. and IV.

Reference will also be made to Cunningham's "Growth of English Industry and Commerce," Vol. II.; G. L. Beer's "Origins of the British Colonial System"; Bogart's "Economic History of the United States"; Bonar's "Philosophy and Political Economy"; Maine's "Ancient Law," and other works all of which may be obtained from the Class Library.

3. (For General Course students).

Mill: Political Economy (Laughlin).

Bagehot: English Constitution.

DEPARTMENT OF MATHEMATICS.

NEIL BRUCE MACLEAN, M.A. ..... *Professor*

LLOYD A. H. WARREN, M.A. ..... *Lecturer*

The instruction in the Department of Mathematics consists of a series of courses of lectures and class recitations conducted for the following classes of students:—

(1) Students of the Second Year in Arts who select Mathematics as one of their optional subjects;

(2) Students of the Third and Fourth Years in Arts who desire to proceed to a degree by pursuing the prescribed course in Mathematics, or who have elected one of the divisions of the Natural and Physical Science Course containing Mathematics.

(3) Students pursuing courses in Engineering.

The substance of the lecture courses is embodied in the following schedule:—

FIRST YEAR—ENGINEERING.

1. *Analytical Geometry*—Baker's Analytical Geometry. Two hours per week.

2. *Algebra*—Logarithms, Interest and Annuities, Exponential Theorem and Logarithmic Series, Undetermined Coefficients and Partial Fractions. Two hours per week during the First Term.

3. *Geometry*—Solid Geometry and Mensuration, Hall and Stevens' Geometry for Schools, Part II., and Chambers' Practical Mathematics. Two hours per week during the Second Term.

4. *Trigonometry*—Hall and Knight's Plane Trigonometry, Chapters 12-19. Two hours per week during the First Term.

5A. *Spherical Trigonometry*—Todhunter and Leatham's Spherical Trigonometry, Chapters 1-7, inclusive. Two hours per week during the Second Term.

SECOND YEAR—ENGINEERING.

6A. *Calculus*—Murray's Differential and Integral Calculus. Five hours per week.

SECOND YEAR—ARTS.

7. *Algebra*—Hall and Knight's Higher Algebra, Chapters 1, 2, 3, 6, 8, 9, 10, 12, 13, 14, 17, 18. Two hours per week during the First Term.

8. *Trigonometry*—Hall and Knight's Plane Trigonometry, Chapters 19-23, inclusive. Two hours per week during the First Term.

9. *Solid Geometry*—Hall and Steven's Geometry for Schools, Part VI., omitting from sec. 36 to end. Two hours per week during the Second Term.

10. *Analytical Geometry*—Baker's Analytical Geometry, Chapters 6-9, inclusive. Three hours per week during the Second Term.

(N.B.—*Two papers will be set*—one on Algebra and Trigonometry and one on Geometry.)

THIRD YEAR—ENGINEERING.

11. *Practical Astronomy*—Systems of Co-ordinates, Time Determinations, Latitude and Longitude Determinations, Meridian Observations. This is intended to be a practical course for students of the Third Year in Civil Engineering.

THIRD YEAR—ARTS.

12. *Algebra*—Hall and Knight's Higher Algebra, Chapters 19-26, inclusive, Chapter 29, Chapters 33-35, inclusive. Two hours per week.

13. *Plane Trigonometry*—Todhunter and Hogg's Trigonometry, Chapters 19-24, inclusive. Two hours per week during the First Term.

5B. *Spherical Trigonometry*—Todhunter and Leathem's Spherical Trigonometry, Chapters 1-7, inclusive. Two hours per week during the Second Term.

14. *Geometry*—Short course on Polar Coordinates and an Elementary course in Solid Analytical Geometry. Two hours per week.

6B. *Calculus*—Murray, Differential and Integral Calculus. Five hours per week.

FOURTH YEAR—ARTS.

15. *Differential Calculus*—Todhunter's Differential Calculus. Three hours per week.

16. *Integral Calculus*—Todhunter's Integral Calculus. Three hours per week.

17. *Differential Equations*—Lectures based on Johnson's Differential Equations. Three hours per week.

18. *Statics*—Lectures based on Todhunter's Analytical Statics, Chapters 1-10, inclusive, and selections from Chapters 11, 13, 14. Three hours per week.

19. *Dynamics*—Lectures based on Tait and Steele's Dynamics of a Particle, Chapters 1-5, inclusive, and selections from Chapters 6, 7, 9. Two hours per week during Second Term.

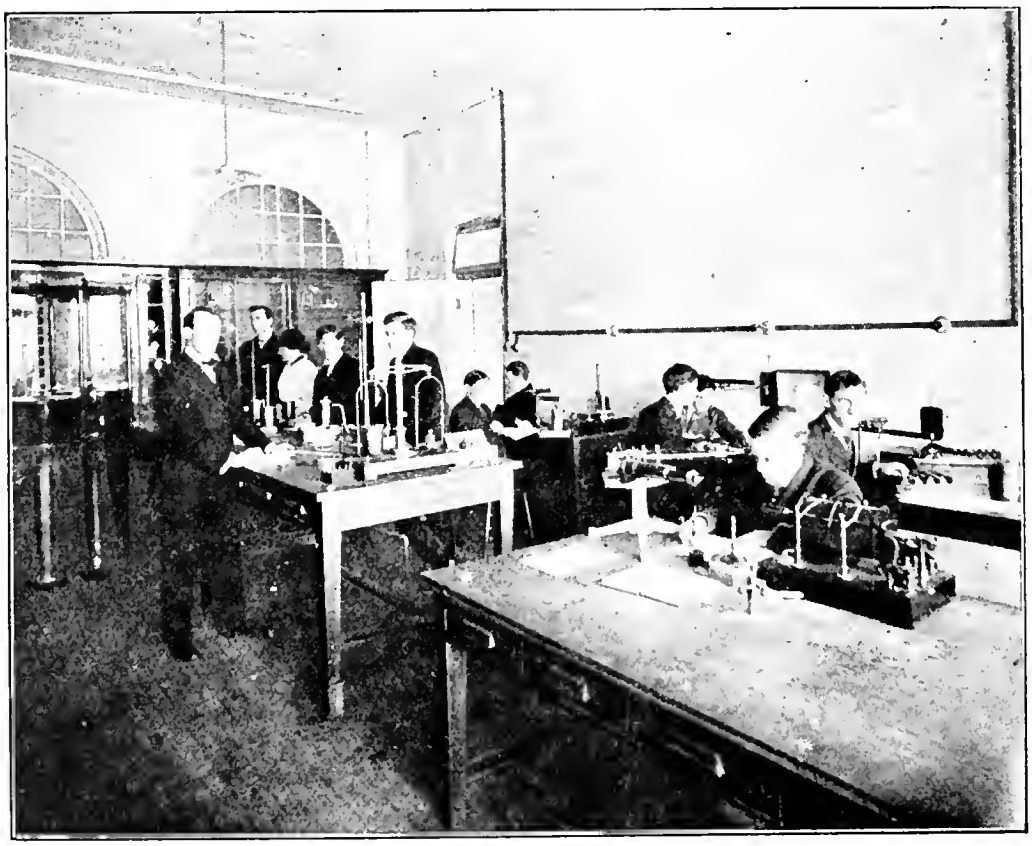
20. *Descriptive Astronomy*—This course is intended for students of the Fourth Year in Arts who are pursuing the General Course, the Course in Natural and Physical Science, or the Course in Mathematics.

The course will give an account of the leading facts of Astronomy and the methods by which these facts are obtained. The lectures will be fully illustrated by means of models, diagrams and lantern projections.

The course will be covered in about fifty lectures.

Reference Books—Moulton, "Introduction to Astronomy;" Young, "Elements of Astronomy;" Young, "General Astronomy;" Barlow and Bryan, "Mathematical Astronomy;" Godfray, "A Treatise on Astronomy;" Campbell, "Elements of Practical Astronomy," Chauvenet's "Astronomy."

MINERALOGY LABORATORY



PHYSICS LABORATORY

DEPARTMENT OF PHYSICS

FRANK ALLEN, M.A., Ph.D., F.R.S.C.....*Professor*
R. K. MCCLUNG, M.A., D.Sc.....*Lecturer*
T. A. NEELIN, B.A.....*Demonstrator*

GENERAL COURSE I. *Professor Allen.*

To be taken by Medical students of the First Year (compulsory) Arts students of the First Year (optional), and students of the General Course (Third Year).

NOTE.—Students in Arts not electing this course in their First Year may arrange to take it in their Second Year. Those intending to take any of the Special Courses in Natural Science and Mathematics are strongly urged to elect this course in their First Year.

In this course the principles of Physics will be discussed with experimental illustrations in such a way that no Mathematics higher than Plane Trigonometry will be required.

Monday, Wednesday, Friday, 2 to 3 p.m.

Part I.

Mechanics and Hydrostatics—

Velocity, acceleration, Newton's Laws of Motion, composition and resolution of vectors, systems of units, force, gravitation, mass, weight, momentum, equilibrium, centre of gravity, simple harmonic motion, the pendulum, friction, motion of rotation, the gyroscope, energy, work, machines, conservation of energy, properties and constitution of matter.

Pressure at a point, transmission of pressure, density, barometer, Boyle's Law, pumps, syphon, surface tension, capillarity, osmosis, diffusion, kinetic theory of gases.

Heat—

Theory of heat, production of heat, temperature, expansion, thermometry, calorimetry, specific heat, fusion, vaporization, regelation, hygrometry, Charles' Law, spheroidal

state, critical state, liquefaction of gases, convection, conduction, radiation, radiometer, Laws of Thermodynamics, mechanical equivalent of heat, heat engines, theory of sun's heat, dissipation of heat, production of heat by radioactivity.

Part II.

Magnetism—

Laws of magnetic force, lines of force, magnetic induction, molecular theory of magnetism, diamagnetism, paramagnetism, terrestrial magnetism.

Electricity—

Laws of electrostatics, characteristics of electric charges, induced charges, influence machines, electroscope, Leyden jar, condenser, electric current, batteries, electromotive force, potential, resistance, Ohm's Law, galvanometers, electrolysis, Joule's Law, Ampere's Laws, induced currents, thermo-electricity, electro-magnetism, telegraph, telephone, electric light, electrical machinery, alternating currents, transformer, induction coil, electric waves, radio-telegraphy, discharge of electricity through gases, cathode rays, Roentgen rays, radio-activity.

Sound—

Production of sound, velocity, reflection, refraction, pitch, intensity, quality, musical scale, resonance, interference, beats, vibration of plates, rods, strings and air columns, musical instruments, perception of sound by the ear, consonance, dissonance.

Light—

Theories of light, velocity, reflection, refraction, photometry, dispersion, the spectrum, spectroscopy, absorption of light, color, fluorescence, phosphorescence, opalescence, interference, diffraction, double refraction, polarization, optical instruments, the eye, color vision, color blindness, effect of magnetism on light.

COURSE 2. *Professor Allen.*

Mechanics, Heat and Sound.

In this course special attention is given to the derivation of formulae and the solving of problems.

To be taken by Third Year students in the Mathematics and Natural Science courses.

Monday and Wednesday, 11 to 12 o'clock.

COURSE 3. *Professor Allen.*

Electricity, Magnetism and Light.

This course is similar to Course 2.

To be taken by Fourth Year students in Mathematics and Natural Science.

Monday and Wednesday, 10 to 11 o'clock.

COURSE 4. *Dr. McClung.*

Mechanics, Heat and Sound.

This course is designed especially for Engineering students. The lectures involve the main principles of Mechanics, Heat and Sound, with special attention to their practical applications and to the solving of problems.

Students are to perform in the laboratory a series of experiments as in Course 6.

To be taken by First Year students in Engineering.

Time to be arranged.

NOTE.—During the session of 1910-11 this course will be taken also by the Second and Third Year students in Engineering.

COURSE 5. *Dr. McClung.*

Electricity, Magnetism and Light.

This course is similar to Course 4.

Students will perform in the laboratory a series of experiments as in Course 7.

To be taken by Second Year students in Engineering.

Time to be arranged.

NOTE.—During the session 1910-11 this course will be taken by the Fourth Year Engineering students only.

COURSE 6.

Professor Allen, Dr. McClung, Mr. Neelin.

Laboratory Course in Mechanics, Heat and Sound.

The Theory and Methods of Physical Measurements. Students are to perform an extensive series of experiments, and the results of each experiment are to be presented in a suitable report. Whenever possible graphical methods are to be used. It is highly desirable that students should have an elementary knowledge of Analytical Geometry and Calculus.

To be taken by Third Year students in Mathematics and Natural Science and by First Year students in Engineering. Each student will take one period per week.

Tuesday and Thursday, 10 to 1 o'clock.

NOTE.—During the session 1910-11 this course will be taken also by the Second and Third Year Engineering students.

COURSE 7.

Professor Allen, Dr. McClung, Mr. Neelin.

Laboratory Course in Electricity, Magnetism and Light.

Similar to Course 6.

To be taken by Fourth Year students in Mathematics and Natural Science and by Second Year students in Engineering. Each student will take one period per week.

Tuesday and Thursday, 10 to 1 o'clock.

NOTE.—During the session 1910-11 the only Engineering students taking this course will be those of the Fourth Year.

COURSE 8. *Dr. McClung.*

Electrical Measurements.

This course comprises a more advanced study, both theoretical and practical, of electrical measurements, and is especially suited to students in Electrical Engineering. It will

involve the use of electrical standards, quantitative measurements of capacity of condensers, self and mutual induction, magnetic induction and hysteresis, potentiometer measurements, high and low resistance and photometry.

To be taken by Third Year students in Electrical Engineering. Other students may take this course by special permission.

Time to be arranged.

Books recommended—

Gage's Principles of Physics (Goodspeed).

A Text Book of Physics. Watson.

The Tutorial Physics.

DEPARTMENT OF BOTANY.

A. H. Reginald Buller, B.Sc., London, Ph.D., Leip., D.Sc., Birmingham .. . . *Professor*

Course 1.

This course is intended for Engineering students of the First Year, and Arts students of the Second Year, and students of the Third Year in Arts who wish to graduate in Science.

Lecture Days—Wednesdays and Fridays, at 3 p.m., throughout the session.

Laboratory—For students of the Third Year only—Thursdays, 10 to 12.

Classification of Objects—Comparison of living and non-living matter, and of plants and animals.

The Morphology of the Seed; germination; the external morphology of the seedling; the physiology of germination; the general nature of the reserve food-stuffs; the relations of the seedling with external conditions and natural forces; the theory

of irritability; growth to exhaustion, and the general conditions of active life and self-nutrition.

The general morphology of the Plant Body, and the principal modifications in form and distribution of the vegetable members, Root, Shoot and Leaf.

Protoplasm as the physical basis of life; the Cell, and its principal modifications for special purposes; development and distribution of the Tissues considered especially from a physiological standpoint.

The Leaf as a bio-anatomical study; epidermis; vascular bundles, ground-tissue, intercellular spaces.

The internal morphology of the Stem in its chief modifications; the results of cambial activity; the secondary protective tissues, Cork and Bark, the Root.

The Bud; the principal characteristics of increase in length in shoot and root.

The phenomena of climbing, and illustrations of special powers of movement.

The elementary facts in the Nutrition of the plant, including the nature and sources of the raw material of food, and the constitution of the soil; absorption and the transpiration current; the nature and functions of chlorophyll; the broad principles of metabolism, and the distribution, storage, and utilization of its products. Respiration.

Nutrition without chlorophyll, and special fermentative changes, illustrated by Yeast, Bacteria and Molds. Degrees of Parasitism in Flowering Plants. Insectivorous Plants.

Reproduction, asexual and sexual, further illustrated by Spirogyra, Vaucheria, Fucus and Agaricus. The primary divisions of the Vegetable Kingdom, viz.: Thallophyta, Bryophyta (illustrated by a moss plant), Pteridophyta (a fern plant), and Phanerogamia (flowering plants).

The general character and structure of the reproductive organs in Phanerogamia; pollination, and its methods; fertilization; the development of the seed and the fruit; seed protection and dispersal; the natural spread of plants, and its limitations.

The Flower, and its chief modifications in structural plan. Examples of Natural Orders.

Course 2.

A Course of about 40 Lectures to Arts students of the Fourth Year intending to graduate in Science.

Lecture Days—Monday, 2-3 p.m., and Wednesday, 11-12 a.m.

Laboratory—Tuesday, 10 a.m. to 1 p.m., and Friday, 11 a.m. to 1 p.m.

Life History and Classification of Plants.

The morphology and physiology of the chief groups of the Vegetable Kingdom and their most important subdivisions, viz.:

Thallophyta—Myxomycetes, Cyanophyceæ, Schizomycetes (Bacteria), Diatomaceæ, Conjugatæ, Chlorophyceæ, Phæophyceæ, Rhodophyceæ, Characeæ, Hyphomycetes.

Bryophyta—Hepaticæ, Musci.

Pteridophyta—Filices, Hydropterideæ, Equisetaceæ, Lycopodieceæ, Selaginellaceæ.

Phanerogamia (Spermophyta)—Gymnospermæ, Angiospermæ.

Physiology—Students are expected to read up the general physiology of plants from text-books and special papers. The laboratory work will illustrate the processes of absorption of food materials, transpiration, carbon assimilation, respiration, growth, and movement. Practice will be given in the preparation of pure cultures of bacteria, yeast, moulds and other fungi. Enzymes will be extracted and their action studied.

Field Work—At the beginning of the session there will be several excursions to the prairie, woods, and river side for the purpose of studying the algæ, fungi, and flowering plants in relation to their environment. Students are recommended to acquaint themselves with the Canadian orders of flowering plants during the summer vacation.

The Laboratory—The Botanical Department includes the lecture theatre, professor's room, and the laboratory. The

latter has one room devoted to plant physiology, one to morphology, and one to museum purposes. There is also a small greenhouse and a dark room for photographing.

Research Work—The laboratory will be opened and encouragement given to any one desiring to carry on research on some botanical problem.

DEPARTMENT OF GEOLOGY AND MINERALOGY

ROBERT C. WALLACE, M.A. (Edin.), B.Sc. (Edin.), Ph.D. (Göttingen) ..... *Lecturer*

General Geology.

For Arts students of the Fourth Year taking the General Course, for Arts students of the Third Year taking one of the new divisions of the course in Natural and Physical Science, and also for students of the Third Year of the Engineering Course.

Lecture Days—Tuesday, 2-3 p.m., and Thursday, 2-3 p.m. throughout the session.

The course will include the main outlines of Physical and Historical Geology, and will be illustrated as fully as possible with fossils and rock specimens.

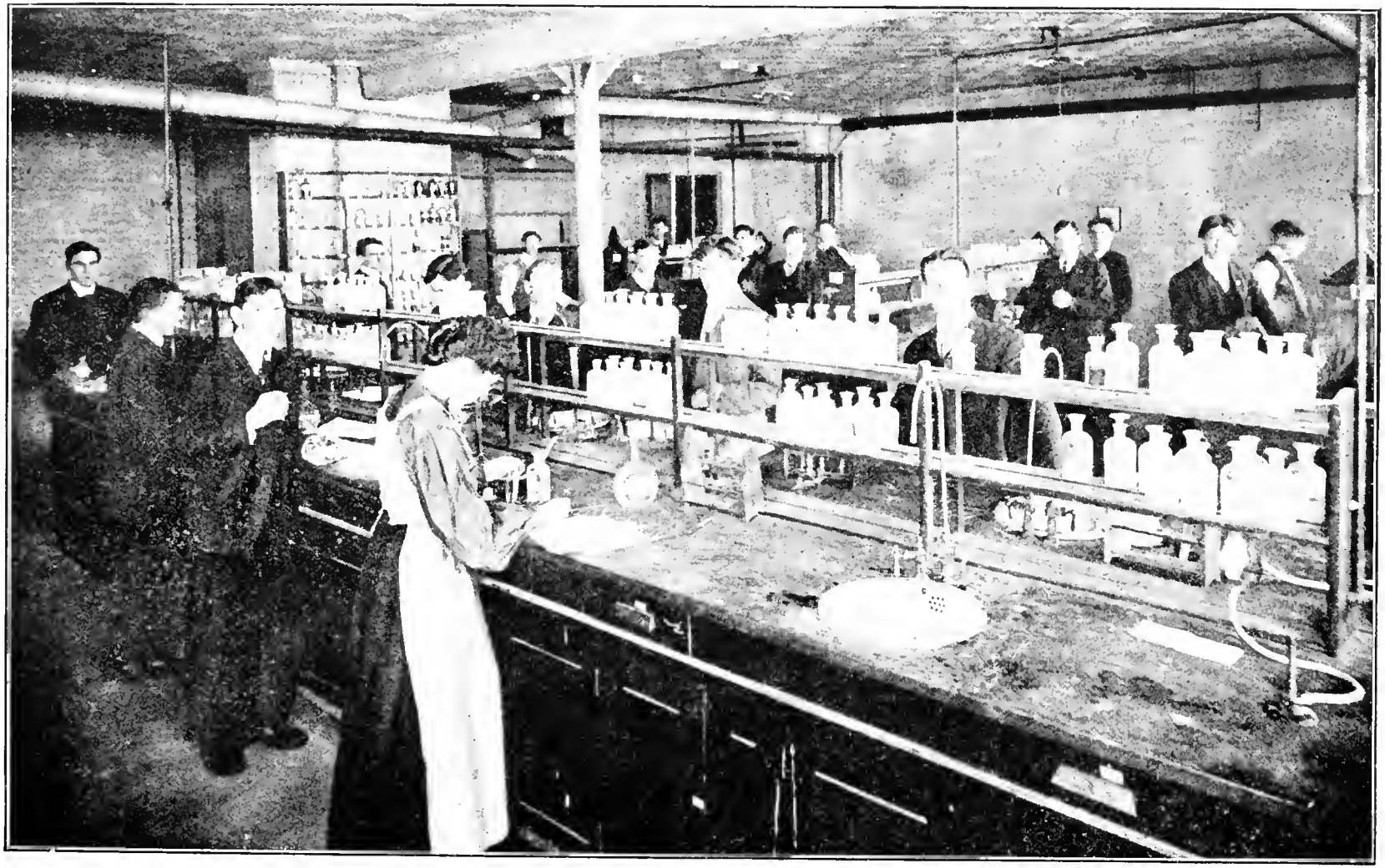
Laboratory—For students in Natural and Physical Science and Engineering Third Year. Thursday, 3-5 p.m.

Methods in mapping. Study of rock specimens and fossils.

Mineralogy and Crystallography.

There will be a course of lectures (with laboratory work) in these subjects for students of the Third Year in the Natural Science course.

A similar course will also be given for Fourth Year students in Civil Engineering.



JUNIOR CHEMICAL LABORATORY

DEPARTMENT OF CHEMISTRY.

MATTHEW A. PARKER, B.Sc., F.C.S. ..... *Professor*
H. P. ARMES, B.Sc, PH.D. ..... *Lecturer*
B. OLSON, B.A. ..... *Demonstrator*

COURSE 1.

This course is attended by First Year Medical Students, First Year Engineering Students, Second Year Arts Students (Chemistry option), and by Third Year Arts Students in Natural Science who have not attended it previously.

The course consists of about fifty lectures, in addition to the practical work.

The following subjects are treated:—

Physical and chemical change; causes and conditions of chemical change; simple and compound substances; indestructibility of matter; laws of chemical combination; the atomic theory; atoms and molecules; Avogadro's hypothesis; equivalents, atomic and molecular weights; valency; symbols; formulæ and equations; calculations of volumes and weights; acids, bases and salts; electrolysis; solution; diffusion; dissociation; spectrum analysis; the periodic law; alloys.

The preparation and properties of the following elements and their more important compounds:

Hydrogen; sodium, potassium; magnesium; calcium, strontium, barium; boron, aluminum; carbon, silicon, tin, lead; nitrogen, phosphorus, arsenic, antimony, bismuth, oxygen, sulphur; fluorine, chlorine, bromine, iodine; chromium, manganese; iron, cobalt, nickel; zinc, cadmium, mercury; copper, silver, gold; platinum.

A tutorial class (attendance on which is voluntary) is held in connection with this course. The hour of meeting is arranged to suit the convenience of students.

Text-book recommended: General Chemistry for Colleges. Smith (The Century Co.).

For students intending to enter the Special Course in Natural Science, Smith's General Inorganic Chemistry (Century Co.), or Holleman's Inorganic Chemistry.

COURSE 2.

This short course of about forty lectures is arranged for Science students of the Third Year. It will deal with some

of the more general subjects which are barely touched on in the first course.

NOTE.—Students of the Third Year in the Natural Science course who have not attended the first course in Chemistry, or its equivalent, will be required to attend the lectures of the first course in addition to those of the second course.

COURSE 3.

This course is attended by Fourth Year Arts students in Natural Science.

The first part of the course deals chiefly with the constitution and chemistry of the chief classes of compounds belonging to the fatty series, viz., saturated and unsaturated hydrocarbons; halogen derivatives of the hydrocarbons; monohydric alcohols; ethers; aldehydes and ketones; monobasic acids and their substitution products; esters; amines; polyhydric alcohols and their oxidation products; carbohydrates; cyanogen compounds, etc.

In the second part of the course the following subjects are considered: Constitutional differences between fatty and aromatic compounds; constitution and chemistry of benzene and its homologues; halogen, nitro-, and amino- derivatives of the hydrocarbons; diazo-, and azo- compounds; sulphonic acids; phenols, quinone; alcohols, aldehydes and ketones; aromatic acids and their derivatives; triphenyl methane and its derivatives; naphthalene, anthracene and their derivatives; pyridine, quinoline, and their derivatives; alkaloids; terpenes; stereoisomerism; physical properties of carbon compounds; determination of molecular weights.

Text-books recommended: Remsen's or Perkin and Kippings' Organic Chemistry.

COURSE 4.

This course of about twenty lectures is arranged for Civil Engineering students of the Third Year. It will deal more particularly with the Metallurgy of Iron and Steel.

COURSE 5.

This course of about twenty lectures is arranged for Electrical Engineering students of the Fourth Year. It will deal especially with technical applications of electro-chemical methods.

Students in Natural Science of the Third Year are required to attend the Chemical Laboratory six hours a week; Natural Science students taking Chemistry in the Fourth Year attend the Laboratory nine hours per week.

Arts students of the Second Year who take the Chemistry option are required to attend the Chemical Laboratory on Fridays from 3 to 5 p.m.

The laboratory work begun in the Second Year of the Arts course is continued in the Third and Fourth Years of the Natural Science course. It comprises a series of experiments illustrative of chemical theory, including practice in the fitting up of apparatus and the preparation of a number of common inorganic substances; the study of the qualitative methods of detecting and separating mineral substances; quantitative analysis, volumetric and gravimetric; preparation of inorganic and organic substances, etc.

Medical students of the First Year are required to attend the Chemical Laboratory from 3 to 5 on Tuesdays and Fridays. The work includes exercises on the preparation and properties of some of the common gases, etc., and a course of qualitative analysis and simple quantitative work.

Engineering students of the First Year attend the Chemical Laboratory from 9 to 12 on Fridays. This course includes preparation of several inorganic substances, and experiments introductory to qualitative and quantitative analysis.

Engineering students of the Second Year attend the Chemical Laboratory from 9 to 12 on Wednesdays. The course includes inorganic qualitative analysis; estimation of carbon, sulphur, phosphorus, etc., in iron and steel; quantitative analysis of cements; water analysis, etc.

Special students may be enrolled for the purpose of carrying on such advanced work as the equipment permits of and special facilities will be given to those capable of carrying on research work.

Each student is supplied with such apparatus as may be required with the exception of platinum wire and foil, laboratory towel, etc., which he must provide for himself.

Science and Engineering students will use Henderson and Parker's "Introduction to Analytical Chemistry" (Blackie and Son).

A deposit of five dollars is paid to the Registrar at the beginning of each session, and all breakages will be made good out of this. See page 194.

A record of all laboratory work must be kept, and report books must be handed to the examiners in chemistry previous to the practical examination for the degree.

Attention is called to the regulation regarding practical work on page 176.

DEPARTMENT OF PHYSIOLOGY AND ZOOLOGY

Swale Vincent, M.D. (London), D.Sc. (Edin.), M.R.C.S., L.R.C.P., F.R.S.S.E. & C. ..... *Professor*

A. T. Cameron, M.A., B.Sc. ..... *Lecturer in Physiology*

C. J. Triggerson, M.A., Ph.D. ..... *Lecturer in Zoology and Demonstrator in Physiology*

C. A. Baragar, B.A. ..... *Student Demonstrator*

The Physiological Department consists of a lecture theatre, a demonstration room for Experimental Physiology, a demonstration room for Physiological Histology, a preparation room for Physiological Chemistry, and students' laboratories for Chemical and Experimental Physiology.

Physiology

Two courses of about fifty lectures each will be given during the session. The Elementary Course must be attended by Medical Students in their Second Year, and the Advanced by Medical Students in their Third Year.

Elementary Lecture Course.

Monday and Wednesday, 2 to 3 p.m.

1. *Structure and Physiology of the Cell, and of the Simple Tissues—*

General Physiology; general physiological methods; graphic records; the cell as an elementary organism; functions of nucleus and protoplasm; the vital phenomena of cells; anabolism, katabolism; manifestations of life; effects of external influences on cells (stimuli and irritability).

2. *Physiology of Muscle—*

Apparatus for muscle-nerve experiments; contraction of muscle: gross change in form; microscopic change; simple twitch; effects of different conditions; isometric and isotonic contraction; work of muscle; muscle wave; summation of stimuli, tetanus; voluntary contraction; the muscle sound; physical and chemical properties of muscle; chemical and electrical changes in muscle during contraction, etc.

3. *Physiology of Nerve—*

Transmission of the nerve impulse; rate of transmission; effects of varying conditions; conductivity; electrotonus and Pflüger's Law; electrical changes during contraction; negative variation; etc.

4. *Digestion and Absorption—*

The digestive enzymes; the tissues and mechanisms of digestion; properties of saliva, gastric juice, bile, pancreatic juice, and the succus entericus; the foodstuffs and the changes which they undergo in digestion; nervous mechanism of secretion of the digestive juices; chemical mechanism of secretion; absorption by capillaries and by the villi; absorption in the large intestine; muscular mechanisms of digestion, mastication, deglutition, movements of intestine (peristaltic movements); vomiting; defaecation; the lacteals and the lymphatic system, and the part they play in absorption; etc.

5. *The Circulation of Blood and Lymph—*

Structure and properties of the blood vessels; blood pressure; rate of flow of blood; action of the heart and its

valves; the heart sounds; pressure in the heart cavities during a cardiac cycle; the cardiac impulse; cardiograms; the pulse; the cardiac rhythm throughout vertebrates; functions of the cardiac ganglion; innervation of the heart; augmentation, inhibition; the work of the heart; innervation of the blood vessels; vaso constrictor; vaso dilator; the capillary circulation; inflammation; variations in the quantity of blood and lymph; anaemia; plethora; lymph flow; etc.

6. *Respiration*—

General mechanics of respiration; muscular mechanisms; nervous mechanisms; types of breathing; changes in the air of respiration; circumstances influencing chemical changes; respiratory changes in the blood; oxygen and carbon dioxide in air and blood; spectroscopic study of arterial and venous blood; derivatives of hæmoglobin; respiratory changes in the lungs; respiratory changes in the tissues; apnœa, dyspnœa, asphyxia; eupnœa, hyperpnœa; etc.

ADVANCED LECTURE COURSE.

Tuesday and Friday, 2 to 3 p.m.

1. *Metabolism*—

Fate of food stuffs in the organism; protein metabolism; carbohydrate metabolism; glycosuria, diabetes; starvation; source of muscular energy; animal heat; nutrition and diet; classification of foods; etc.

2. *Internal Secretion and the Ductless Glands*—

General; internal secretion as applied to glands which have also an external secretion; internal secretion of the adrenals; Addison's disease; internal secretion of the thyroids and parathyroids; myxœdema, cretinism, Graves' disease; internal secretion of the pituitary body; acromegaly; functions of thymus, spleen, hæmal glands; etc.

3. *Excretion (Kidneys and Skin)*—

Structure and functions of the kidney; secretion of urine, neometries; nature of tubular secretion; nature of glo-

merular secretion; chemistry of the urine, urea, uric acid, etc.; micturition, nervous mechanism; structure and functions of the skin; perspiration; etc.

4. *Structure and Functions of the Nervous System—*

General account of the nervous system; nerve cells and nerve fibres; the Neurone theory and modern criticisms; chemistry of nervous tissues; structure of the spinal cord; ascending and descending tracts and their cell connections; functions of the spinal cord, reflex actions; structure and functions of the medulla oblongata; nuclei of cranial nerves; structure and functions of the Pons Varolii and cerebellum; nuclei of the cranial nerves; structure and functions of the mesencephalon; structure and functions of the thalamencephalon; structure and functions of the cerebral hemispheres, the cerebral cortex, motor areas; localisation of functions; attempts to locate higher psychical functions, association areas; the nature of mind; the sympathetic and related system of nerves; the autonomic fibres; preganglionic and postglangionic fibres; action of nicotine; the cranial and sacral autonomic fibres; the enteric nervous system; etc.

5. *Special Senses—*

The structure and functions of the eye, ear and nose; mode of termination of sensory nerves; the skin and tactile sensation; sensations of heat, cold and pain; etc.

6. *Voice and Speech—*

Anatomy and physiology of the larynx; the quality, pitch, and loudness of the human voice; the different voice registers; vowel sounds; etc.

7. *Physiology of Reproduction.*

8. *General Chemistry of the Animal Body.*

These lectures will be illustrated as fully as possible by diagrams, models and experiments.

Physiological Organic Chemistry.

This class will meet on Wednesdays from 5 to 6 p.m. throughout the session. The following is an outline of the sub-

jects dealt with; the second half, as far as possible, will be treated from a physiological standpoint.

Hydrocarbons of the fatty and aromatic series, halogen derivatives, alcohols and phenols, ethers, aldehydes and ketones, fatty acids, esters, etc.

Glycerol and the fats, carbohydrates, glucosides, cyanogen compounds, urea and its derivatives, uric acid and allied substances, aromatic nitrogen compounds, alkaloids, proteins, etc.

Practical Physiology.

Students of Medicine in their Second and Third Years, and students of Arts taking Physiology as a Science option, are required to attend practical classes in Experimental Physiology before Christmas, in Physiological Chemistry after Christmas.

The Elementary Practical Class will meet during the session on Monday and Wendesday, 3—5 p.m., the Advanced Practical Class on Tuesday and Friday, 3—5 p.m. Particular importance will be attached to punctuality and regularity in attendance at these practical classes.

The course in Experimental Physiology will consist of the following exercises:

Elementary Course.

Simple experiments in muscle, nerve physiology, graphic records, effects of varying conditions on muscular contractions, etc.

Advanced Course.

Transmision of nerve-impulse, electro-physiology, electrotonus, Pflüger's Law, the beat of the heart and its nervous control, perfusion through blood-vessels, reflex action, blood-pressure, etc.

The course in Physiological Chemistry will cover exercises in the following sections:

Elementary Course.

Detection of elements, alcohols, ethers, aldehydes and ketones, organic acids, carbohydrates, amines and amides,

amino-acids, ureides, uric acid, benzene and its derivations; preparation and purification of some organic compounds; proteins, colloids, enzyme action, blood, serum, urine, etc.

Advanced Course.

Detection and estimation of carbohydrates, fats, proteins, protein derivatives; food constituents; study of digestive processes; blood; normal and pathological urine with the quantitative estimation of its constituents.

Physiological Histology—Students in Arts taking Physiology in Third or Fourth Years will be required to attend a course of practical physiological histology. This will be conducted in the physiological department at hours to be arranged.

Note—Students in Arts taking Physiology in their Third Year will be required to attend the lectures and practical classes arranged for Second Year Medical students (see Syllabus), and students in Arts taking physiology in their Fourth Year must attend the classes arranged for Third Year Medical students (see Syllabus.)

The examination requirements for Third and Fourth Years of the Arts course will be similar to those for the Second and Third Years of Medicine respectively, except in so far that Arts students may be required to pass an examination in practical histology.

Special demonstrations in Experimental Physiology will be announced during the first half of the session.

The physiological laboratories are open daily from 9 a.m. to 11 p.m. for the prosecution of original research. Application is to be made to the Professor.

Text-books—Text-book of Physiology edited by Schäfer, 2 vols. (Edin. & Lond., Young J. Pentland); An American Text-book of Physiology edited by Howell, 2 vols. (Phil., W. B. Saunders); Manual of Physiology, Stewart (Phil., W. B. Saunders); A Text-book of Physiology, by Howell, 1 vol. (Phil. & Lond., W. B. Saunders); Elements of Human Physiology, Starling (Lond., J. and A. Churchill).

For Physiological Organic Chemistry—Organic Chemistry for Medical Students, by G. V. Bunge, trans. by R. H. A. Plimmer (Longmans).

For Practical Physiological Chemistry—Practical Physiological Chemistry (junior course for elementary students; senior course for advanced students), R. H. Aders Plimmer. (These books can be purchased in the department.)

For Experimental Physiology—Practical Physiology, Schäfer (Longmans).

For Physiological Histology—Essentials of Histology, Schäfer (Longmans).

A deposit of five dollars is paid to the Registrar at the beginning of each session, and all breakages will be made good from this. See page 194.

Zoology and Comparative Anatomy

A course of about fifty lectures will be given in the Physiological Lecture Theatre during the session, Monday and Thursday, 3-4 p.m. The following is a syllabus:—

General features of the Animal Kingdom.

Distinctive properties of living matter or protoplasm, as illustrated by the structure and mode of life of the Proteus—animalcule or amœba. Differences between animals and plants. The nature and structure of the cell. Cell-division.

The more important facts in the structure and habits of Paramœcium, Vorticella, Hydra, Lumbricus, and Astacus.

The structure and life history of the Frog, the Pigeon and the Rabbit.

Elementary physiology of these animals and their microscopic anatomy. The organs of digestion and their use, the nature of blood, the structure of the heart, and the arrangement of the more important blood vessels. The nature of excretory organs. Mode of breathing. The kidneys and their uses.

Methods of reproduction in animals.

All students taking up Zoology, of whatever year and in whatever course, must attend the above lectures.

There will also be a practical class in Zoology for First Year students in Medicine and for Third Year students in Natural Science, Thursday, 4-6 p.m.

Text-books recommended: Text-Book of Zoology, Parker & Haswell, 2 vols. (Lond. & N.Y., Macmillan & Co.); The Frog, Marshall (Manchester, J. E. Cornish, and Lond., Smith, Elder & Co.); Hertwig's Manual of Zoology, trans. Kingsley (New York, Henry Holt & Co.).

For students commencing the subject—A Text-Book of Zoology, Wells and Davies. (Univ. Tutorial Press.)

For Third Year students in Science and Medical students of the First Year—Parker's Zootomy (Macmillan & Co.); Marshall, The Frog.

DEPARTMENT OF BACTERIOLOGY AND PATHOLOGY

GORDON BELL, B.A., M.D., C.M., *Professor.*

COURSES IN BACTERIOLOGY AND PATHOLOGY.

This course for Third Year students in Medicine comprises a series of 50 didactic lectures and 100 hours' laboratory work devoted to the sliding of general pathological processes; examination of the blood; examination—clinical and microscopical—of the secretions and excretions of the body; culture methods; staining; identification of pathological bacteria; animal inoculation, etc.

A course for Fourth Year students of 25 lectures and 50 hours' laboratory work—devoted to special Pathology and Morbid Anatomy; preparation of microscopical specimens, etc.; demonstration of gross pathological specimens, etc.

Students are required to perform autopsies in rotation as opportunity presents.

COURSE IN HISTOLOGY

This course is for students of the Second Year in Medicine and consists of 25 didactic lectures and 100 hours' laboratory work.

Full instruction will be given in laboratory technique, and each student is required to prepare, stain and mount a full set of specimens for himself.

An excellent projective apparatus is provided for demonstrating specimens.

MANITOBA MEDICAL COLLEGE

Curriculum in Medicine

CURRICULUM IN MEDICINE

The following are the requisites for proceeding in course to admission to the degrees of Doctor of Medicine and Master of Surgery:

I.—DOCTOR OF MEDICINE

1. The presentation of documentary evidence to the Registrar that the applicant is a Bachelor or Doctor of Medicine of some recognized University in His Majesty's Dominions; or

2. Fulfilling the following Matriculation requirements:

(a) Passing the Matriculation Examination in Arts or Medicine, or the examination of the First Year in Arts of this University; or

(b) Presenting to the Registrar a certificate of having passed the Matriculation Examination of a University recognized by the University of Manitoba; or,

(c) Presenting certificates to the Registrar of equivalent or higher standing in some recognized University in His Majesty's Dominions;

AND passing five examinations before taking the degree, viz., the First, Second, Third, Fourth and Fifth Year Examinations.

Prior to presenting himself for each of these examinations, the candidate shall produce sufficiently certified tickets, from some University, College or School, recognized by the University of Manitoba, for the courses of lectures specified hereinafter.

First Year Examination

1. Physics (1 course of 70 lectures).

2. Zoology (1 course of 50 lectures).

3. Practical Zoology (1 course of 25 periods of two hours each).

4. Chemistry (1 course of 50 lectures).

5. Practical Chemistry (1 course of 50 periods of two hours each).

6. Anatomy (1 course of 50 demonstrations).

7. Anatomy, Practical (Upper and Lower Extremity and Thorax).

Second Year Examination

1. Anatomy (a further course of 50 demonstrations).

2. Anatomy, Practical (the whole body).

3. Organic Chemistry (1 course of 20 lectures).

4. Physiology, Theoretical (1 course of 50 lectures).

5. Physiology, Practical (1 course of 50 periods of 2 hours each).

6. Materia Medica and Pharmacy (1 course of 30 lectures).

7. Sanitary Science (1 course of 25 lectures).

8. Histology (1 course of 25 demonstrations).

9. Histology, Practical (1 course of 50 periods of 2 hours each).

10. Embryology and Morphology (1 course of 30 lectures).

Third Year Examination

1. Anatomy, Applied (1 course of 35 demonstrations).

2. Physiology, Theoretical (a further course of 50 lectures)

3. Physiology, Practical (a further course of 50 periods of 2 hours each).

4. Therapeutics (1 course of 50 lectures).

5. Medical Jurisprudence (1 course of 15 lectures).

6. Pathology, Theoretical (1 course of 50 demonstrations).

7. Pathology, Practical (1 course of 50 periods of 2 hours each).

8. Practical Pharmacology (1 course of 20 demonstrations of two hours each).

9. Physical Diagnosis (Out-door), (1 course of 25 demonstrations).

10. Splints and Bandaging (Out-door), (1 course of 25 demonstrations).

No examination required in Physical Diagnosis and Splints and Bandaging.

Fourth Year Examination

1. Bacteriology, Theoretical (1 course of 25 demonstrations).

2. Bacteriology, Practical (1 course of 25 periods of 2 hours each).

3. Medicine, Part I. (1 course of 50 lectures).

4. Surgery, Part I. (1 course of 50 lectures).

5. Clinical Medicine (1 course of 75 lectures).

6. Clinical Surgery (1 course of 75 lectures).

7. Obstetrics (1 course of 30 lectures).

8. Clinical Obstetrics.

9. Gynæcology (1 course of 35 lectures).

10. Pediatrics (1 course of 25 lectures).

11. Anaesthetics (1 course of 10 lectures or demonstrations).

No examination required in this year in Clinical Medicine, Clinical Surgery and Anaesthetics.

Fifth Year Examination

1. Medicine, Part II. (a further course of 50 lectures).

2. Surgery, Part II. (a further course of 50 lectures).

3. Clinical Medicine (a further course of 75 lectures).

4. Clinical Surgery (a further course of 75 lectures).

5. Obstetrics (a further course of 20 lectures).

6. Clinical Obstetrics.

7. Clinical Gynæcology.

8. Ophthalmology and Otology (1 course of 20 lectures and 20 practical demonstrations).

9. Operative Surgery (1 course of 25 practical demonstrations).

10. Orthopedic Surgery (1 course of 25 lectures or demonstrations).

The examinations in Medicine and Surgery cover both Fourth and Fifth Year work. Orthopedic Surgery is included in the examination on General Surgery.

Each candidate for this examination shall also furnish documentary evidence of attendance for twenty-four months at some incorporated General Hospital, and also of eight months' practice in a Lying-in Hospital, or of having had equivalent

obstetrical advantages, with a certificate of attendance upon at least eight cases of labor.

The tickets (except the General Hospital ticket) for examination must all be for attendance subsequent to the date when the candidate presenting them should have gone up for his Second Year Examination, and must extend over two full Winter Sessions of seven months each.

In the case of any student from another university applying for admission *ad eundem statum* in this University, it shall be at the option of the Board of Studies to admit such student, even although his tickets may conflict with the foregoing regulations, but no student from another university can be admitted to the Fifth Year Examination unless he has attended one full seven months' winter session, taking out all the Fifth Year tickets of a Medical School in this Province affiliated with this University.

When a student is a graduate in Arts in any recognized University in His Majesty's Dominions, he may complete his medical course in four winter sessions of seven months each, and shall not be required to produce a ticket for Physics, Zoology, Chemistry, Practical Chemistry, or to pass an examination in Physics, Zoology, Chemistry, or Practical Chemistry of the First Year, provided he shall satisfy the Board of Studies that he has already taken second class honors in such subjects in his course in Arts.

The tickets of such student in Medicine, Surgery, Obstetrics and Diseases of Children, Diseases of Women, Clinical Medicine, Clinical Surgery, and Pathology, must all be for attendance subsequent to the end of his second full Winter Session at college. Honor graduates in Natural Science shall not be required to present tickets, or pass an examination in any subjects included in their Science Course.

A graduate in Arts may take the examinations for First, Second and Third Years at such time as he can present sufficiently certified tickets in each subject during the first two years of his course.

By *sufficiently certified* tickets referred to in this Statute, it is meant that each ticket shall have entered upon it the number of lectures delivered on the subject and the exact number of

lectures attended by the student, and that each ticket shall be signed by the professor, and further that the student presenting the ticket shall have actually attended three-fourths of the whole number of lectures delivered on the subject. Such tickets must be lodged with the Registrar by the candidate, at least ten days before the beginning of the examination for which he intends presenting himself.

Each lecture (unless otherwise stated) shall be of one hour's duration, and, as far as practicable, not more than one lecture on each subject shall be delivered on each separate day.

There shall be one paper for Pass and Honors in each subject, and the total value of each paper shall be one hundred marks. Fifty per cent. of the marks in each subject shall be required to satisfy the examiners.

The examinations shall be written, except in Clinical and Practical subjects.

To obtain Honors in each subject, or in the whole examination, of any year, a candidate must obtain 67 per cent. of the marks given in each subject, or of the total marks given for the examination of the year.

Supplemental Examinations in each year in Medicine will be allowed to those students who fail in not more than two subjects.

Such Supplemental Examinations or Conditions *must* be removed as follows:

(a) Supplemental Examinations of the First Year must be removed before the commencement of the Third Year.

(b) Supplemental Examinations of the Second Year must be removed before the commencement of the Fourth Year.

(c) Supplemental Examinations of the Third Year must be removed before the commencement of the Fifth Year.

The Examiners in Medicine shall be appointed by the Council on the nomination of the Board of Studies.

All Degrees in Medicine shall be conferred by the Council at its regular meetings or at meetings specially called for that purpose.

Text-Books

Anatomy—First Year:

(a) Holden's Osteology.

(b) Cunningham's Manual of Practical Anatomy.

(c) Morris' Human Anatomy.

Second Year:

Morris' Human Anatomy.

Third Year:

Applied Anatomy, Taylor.

Fifth Year:

Surgical Operations, Bickham.

Pharmacology and Therapeutics—Lauder Brunton, Whitla, Bruce, Garrod, White, Butler.

Histology—Stohr, Piersol.

Pathology—Hamilton, Stengel, Coates.

Surgery—Moulin, Treves, Walsham, Park, International Text Book.

Practice in Medicine—Osler, Tyson.

Clinical Medicine—Klemperer, Musser, Church, Peterson on Nervous Disorders, Rainy and Hutchinson.

Clinical Surgery—Pearce Gould, Hutchinson's Clinical Lectures

Medical Jurisprudence—Reese, Witthaus and Becker, Husband.

Mental Diseases—Clouston.

Obstetrics—Hirst, American Text Book, Williams, Edgar.

Diseases of Children—J. Lewis Smith, T. Emmett Holt, Taylor and Wells, Roch.

Gynæcology—Dudley, Hirst, Garrigues, Penrose.

Hygiene—Parkes, Rohe, Blythe, Stevenson and Murphy.

Ophthalmology—Swanzy, De Schweinitz.

Otology—Pritchard, Dench.

II.—MASTER OF SURGERY

The additional qualification to that required for the M.D. degree to obtain C.M. shall be the passing of an examination in Operative Surgery and writing a Thesis, in the presence of the examiners, on some assigned subject in Surgery.

The Candidate must obtain 75 per cent. of the total marks in this examination in order to secure the C.M. degree.

REGULATIONS OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF MANITOBA

REGULATIONS REGARDING LICENSE TO PRACTICE MEDICINE IN MANITOBA.

The College of Physicians and Surgeons, which is composed of all the medical practitioners whose names are duly entered on the Manitoba Medical Register, is neither a teaching nor an examining body, but is the sole licensing body in medicine in the Province. The University of Manitoba is the sole examining body.

If the applicant for license be a graduate in medicine of the University of Manitoba a license to practice in the Province is granted wthout further examination by paying the license fee of $125.

If the applicant for license be a graduate in medicine of any other Canadian University, he must send to the Registrar of the College of Physicians and Surgeons, prior to the 1st of March, his medical degree (as a credential), and upon this being found satisfactory he shall be reported to the University as eligible to write at the regular examination, which is held once a year, beginning on the third Monday in April.

In the case of a graduate from any University in the United States or other foreign country, he shall, in addition to sending his degree (or diploma), be required to send to W. J. Spence, Registrar of the University, complete detailed and authoritative information as follows:—

First.—As to his matriculation; giving the name and address of the institution in which he was examined, the subjects, and the extent of each required.

Second.—As to medical course; the number and length of sessions, subjects taught, number of courses in each, and number of lectures in each course, amount of clinical instruction in the different courses, etc., etc.

All candidates writing for license must show that the course of studies of such college or other incorporated body, at the time such member was admitted thereto, was at least equivalent to the requirements for a similar course by the University of Manitoba at the time such member shall seek to be registered as aforesaid.

On receipt of this information the University will decide as to the eligibility or otherwise of the applicant to write for license.

Each applicant, at the same time that he sends his credentials to the Registrar of the College of Physicians and Surgeons, should send $15, examination fee, in a separate communication addressed to the Registrar of the University, which will be returned to him in case he is not permitted to write.

A candidate failing in three or more subjects must write on the whole examination again, and can only do so at a subsequent regular spring examination. If he fail in two subjects, or less, he will be required to write on these only, and may do so at the time of the Supplemental Examinations, which begin on third Thursday in September, or at any subsequent regular examination.

The subjects of examination for license are: Medicine, Surgery, Obstetrics, Diseases of Children, Gynæcology, Therapeutics, Bacteriology, Practical Bacteriology, Pathology, Practical Pathology, Clinical Medicine, Clinical Surgery, Clinical Ophthalmology and Otology. 50% is required in each to pass.

The fee for license, $125.00, is payable to the Registrar of the College of Physicians and Surgeons immediately after the receipt by him from the University of a satisfactory report of the candidate's examination.

No interim permit to practice is granted.

Licentiates in Great Britain, in good standing, may register in Manitoba on presenting the British certificate of registration and paying the registration fee, $125.00.

J. S. GRAY, M.D., Registrar,

College of Physicians and Surgeons of Manitoba,

358 Hargrave Street, Winnipeg.

Curriculum in Engineering

DEPARTMENTS OF ENGINEERING

ERNEST E. BRYDONE-JACK, B.A., C.E. (Renss.), M. Can. Soc. C.E., M. Am. Soc. C.E., M. Am. Soc. Prom. Eng. Ed. .....*Professor of Civil Engineering*

EDWARD P. FETHERSTONHAUGH, B.Sc., A.M. Can. Soc. C.E. .....*Professor of Electrical Engineering*

LESLIE I. JOHNSTONE, B.S...*Lecturer in Surveying and Geodesy*

LESSLIE R. THOMSON, B.A.Sc..*Lecturer in Drawing and Design*

GEORGE HALSTEAD, M.Sc.*Lecturer in Materials and Hydraulics*

JOHN P. DORSEY, E.E.....*Lecturer in Electrical and Mechanical Engineering*

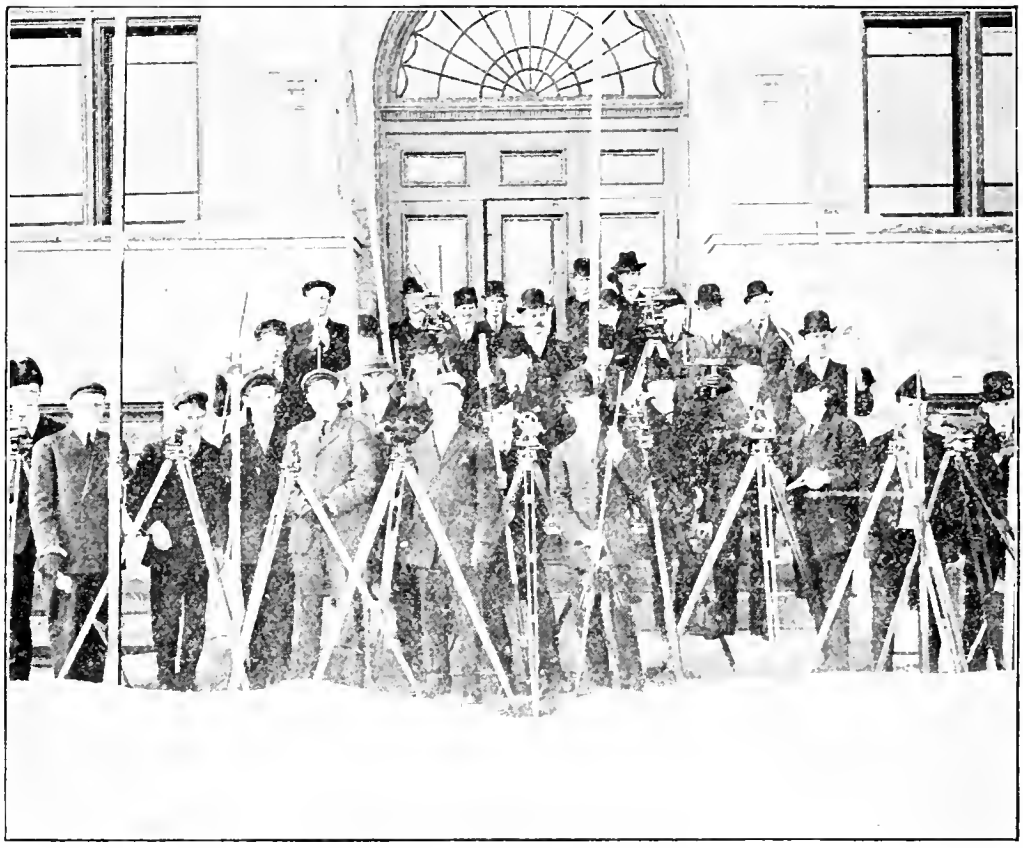
Courses of Instruction and Degrees

Provision is made for instruction in Civil Engineering and Electrical Engineering, each course covering a period of four years. At the completion of the respective courses the degree of Bachelor of Civil Engineering and the degree of Bachelor of Electrical Enginering will be conferred upon the student who has obtained credit for attendance at lectures and for laboratory, field and office work, and has passed the examinations required in the respective courses.

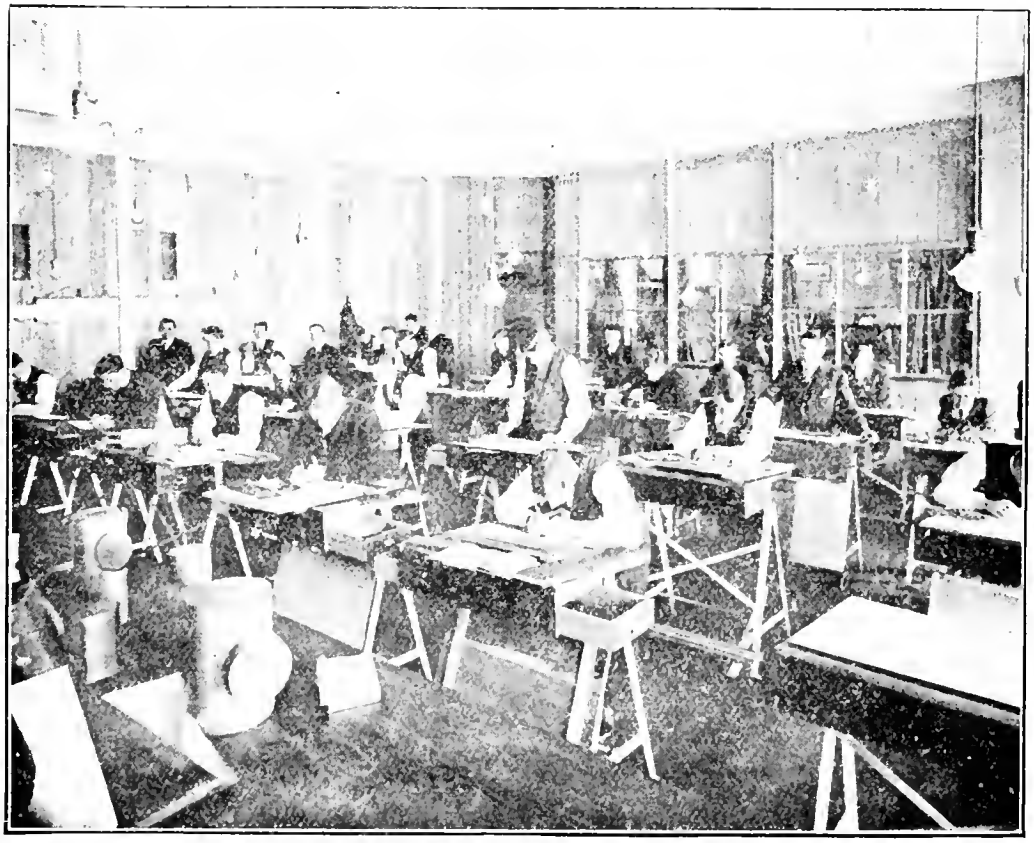
The degrees of Master of Civil Engineering and Master of Electrical Engineering will be conferred upon those who have spent at least two years after graduation in the active practice of their profession and have presented theses (with plans) satisfactory to the examiners, upon any engineering work with which they have been connected.

Course in Civil Engineering

The course in Civil Engineering is designed to give a broad education in those general and scientific subjects which are the foundation of all branches of engineering and a special training in those subjects especially related to Civil Engineering,



READY FOR FIELD WORK



ENGINEERING DRAUGHTING ROOM

enabling the student to take a position in any of the special branches, such as:—

(1) Railroad Engineering.

(2) Land Surveying.

(3) Railway and Geodetic Surveying.

(4) Hydraulic Engineering (including the development of hydraulic power, etc.).

(5) Land Irrigation.

(6) Municipal Engineering (including design and construction of roads and pavements, water supply systems, sewerage systems).

(7) Sanitary Engineering.

(8) Bridge and Structural Engineering.

As the Civil Engineer frequently has to deal with problems involving electrical and mechanical work, the course also provides instruction in the principles of Steam and Mechanical Engineering, as well as in the principles of Electrical Engineering.

With this groundwork the student has a wide field from which to choose his life work, and the course especially fits him for the management and direction of business and engineering enterprises after he has received the necessary practical experience.

Course for Land Surveyors

The course has been especially arranged so that students who intend to take out licenses as Land Surveyors may select subjects from the Civil Engineering course which bear directly upon the examination for Land Surveyors.

Course in Electrical Engineering

The course in Electrical Engineering is intended to give a student first, a preliminary training in the various sciences, such as Physics, Chemistry and Mathematics, which must form the basis of any engineering education; secondly, instruction in the general engineering subjects, such as Surveying, Mechanical Drawing, Strength of Materials, and Hydraulics; and thirdly, acquaintance with the subjects required to qualify a man for the special work of an Electrical Engineer, namely, the flow of continuous and alternating currents, the design and operation of continuous and alternating current machinery, electric railways, electric lighting and power distribution, mechanical engineering, hydraulic machinery and machine design.

In general, the course is intended to give a student a working knowledge of the principles of Civil and Mechanical Engineering, and a more specialized training in Electrical Engineering, which, when combined with experience in practical work, will qualify him ot perform the duties of an engineer in charge of the design or operation of electrical plants, railways or other industries. For full details see page 150 and following pages.

Method of Instruction.

Instruction is given by lectures, recitations and class room work, together with actual practice in field and in drawing work.

Examinations

In order to pass in any examination of the Engineering Course (beyond Matriculation), candidates are required to make a standing of 50 per cent. on each subject. The practical work in the field, drafting room and class-room during the session is counted.

Admission to Engineering Courses

Students may be admitted to the Engineering Courses as:

(1) Undergraduates.

(2) Conditioned Students.

(3) Partial Students.

Undergraduate Students are those who are taking the full course leading to a degree and who have satisfied the requirements for matriculation. (See pages 37-38.)

Conditioned Students are subject to the same rules as govern Conditioned Students in Arts.

Partial Students are those who do not belong to either of the above classes, but who, with the approval of the Professor, are taking one or more of the special subjects of the Engineering Courses, such students being allowed to attend any class without previous examination, provided they satisfy the Professor of their ability to proceed with the class.

COURSE IN CIVIL ENGINEERING

(For Students Matriculating in 1910 or thereafter.)*

First Year

MATHEMATICS—

Analytical Geometry—See Course 1, page 102. Lectures, two hours per week.

Algebra—See Course 2, page 102. Lectures, two hours per week (First term).

Geometry—Solid Geometry and Mensuration. See Course 3, page 102. Lectures, two hours per week (Second term).

Trigonometry—Plane and Spherical Trigonometry. See Courses 4 and 5, page 102. Lectures, two hours per week.

CHEMISTRY—

For Lecture Course see page 113.

In addition to attendance at lectures, students are required to spend three hours per week in laboratory work. This

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* Students who have entered the courses in Engineering prior to 1910, when the course was based on lower Matriculation requirements, must consult the Faculty as to the necessary adjustments to be made in the published programme of Engineering subjects to meet their case. For example, students of the Second Year in 1910-11, must take such subjects of the First Year as they have not already covered under the old curriculum, and so on.

work is designed to make the student familiar with the ordinary laboratory operations and to lead him to solve simple problems in Chemistry by experiment. Several inorganic substances are prepared and studied, while some time is devoted to experiments introductory to qualitative and quantitative work.

PHYSICS—Mechanics, Heat and Sound. See Course 4, page 107. Lectures, two hours per week; laboratory, three hours per week. (See Course 6, page 108).

DRAWING—This Course affords exercises in:

(1) Use of drawing instruments and operations. (Theory and Plates.)

(2) Freehand Drawing. (Plates.)

(3) Lettering. (Theory and Plates.)

(4) Plane Problems, with examples in plane geometry and conic sections. (Theory and Plates.)

(5) Orthographic, Isometric and Oblique Projections. (Theory and Plates.)

(6) Tracing and Blue Printing.

Lectures, two hours per week; class work, five hours per week.

SURVEYING—Use and adjustment of the various surveying instruments, such as the chain, compass, level, transit, etc. (theory and practice); methods of laying out and dividing land; calculation of latitudes, departures, co-ordinates and areas; azimuths, deflections, measurement of angles and repetition of angles; forms of field notes, etc.

Practice in the use of the chain, compass, level, transit and minor instruments; chain and compass surveys; maps of chain and compass surveys; construction of profiles, etc.; office calculations, etc.

Lectures, two hours per week; field work and mapping, six hours per week.

ENGLISH—Lectures, two hours per week.

(a) One period for study of prose masterpieces—twelve selections, to be chosen from "Modern English Prose," Carpenter and Brewster (Macmillan).

(b) One period of practical work, including essays (descriptive and narrative), letters, reports, dictation.

Examination—

One paper on Literature based on text.

One paper on Composition, including (a) Essay based on text; (b) Dictation, if preferred, on some subject connected with Engineering; (c) Compiling of letter or report from data supplied.

Second Year

MATHEMATICS—Differential and Integral Calculus. See Course 6A, page 103. Lectures, five hours per week.

PHYSICS—Light, Magnetism and Electricity. See Course 5, page 107. Lectures, three hours per week; laboratory work, three hours per week. (See Course 7, page 108.)*

CHEMISTRY—Qualitative and Quantitative Analysis. See page 115. Laboratory work, three hours per week.

DRAWING—

Descriptive Geometry—Problems in the relations of straight lines in space, tangencies, intersections and developments, surfaces of revolution, and warped surfaces. (Theory and Plates.)

Perspective—(Theory and Plates).

Shades and Shadows—(Theory and Plates).

Pen and Colored Topography—(Theory and Plates).

Lectures, two hours per week; class work, five hours per week.

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* In 1910-11, students of the Second Year in Engineering will take the same courses in Physics as those of the First Year. See page 142.

SURVEYING—Land surveying and systems of Dominion land surveys; topographic surveying; hydrographic surveying; city surveying; mining surveying; plane table surveying; triangulation.

Lectures, two hours per week.

Topographic and triangulation surveys; use of stadia; topographical maps; hydrographic maps; city plans and profiles, etc.; office calculations.

Field work and mapping, six hours per week.

MATERIALS OF ENGINEERING—Characteristics and manufacture of cement, concrete, brick, stone, wood, iron and steel.

Lectures, two hours per week (Second term).

KINEMATICS OF MACHINES—Elements of mechanism, relative motion, velocity and acceleration of machine parts, classification of simple mechanisms, design of wheel teeth.

Lectures, two hours per week.

ENGINEERING ECONOMICS—Fundamental principles of banking, accounts, finance and corporations.

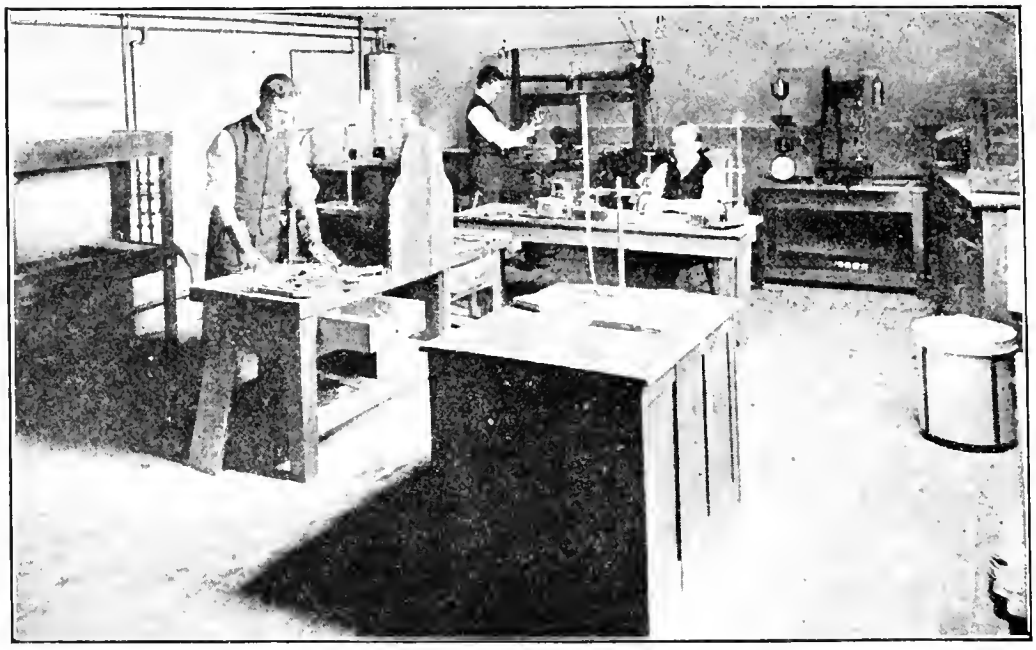
Lectures, two hours per week (First term).

Third Year

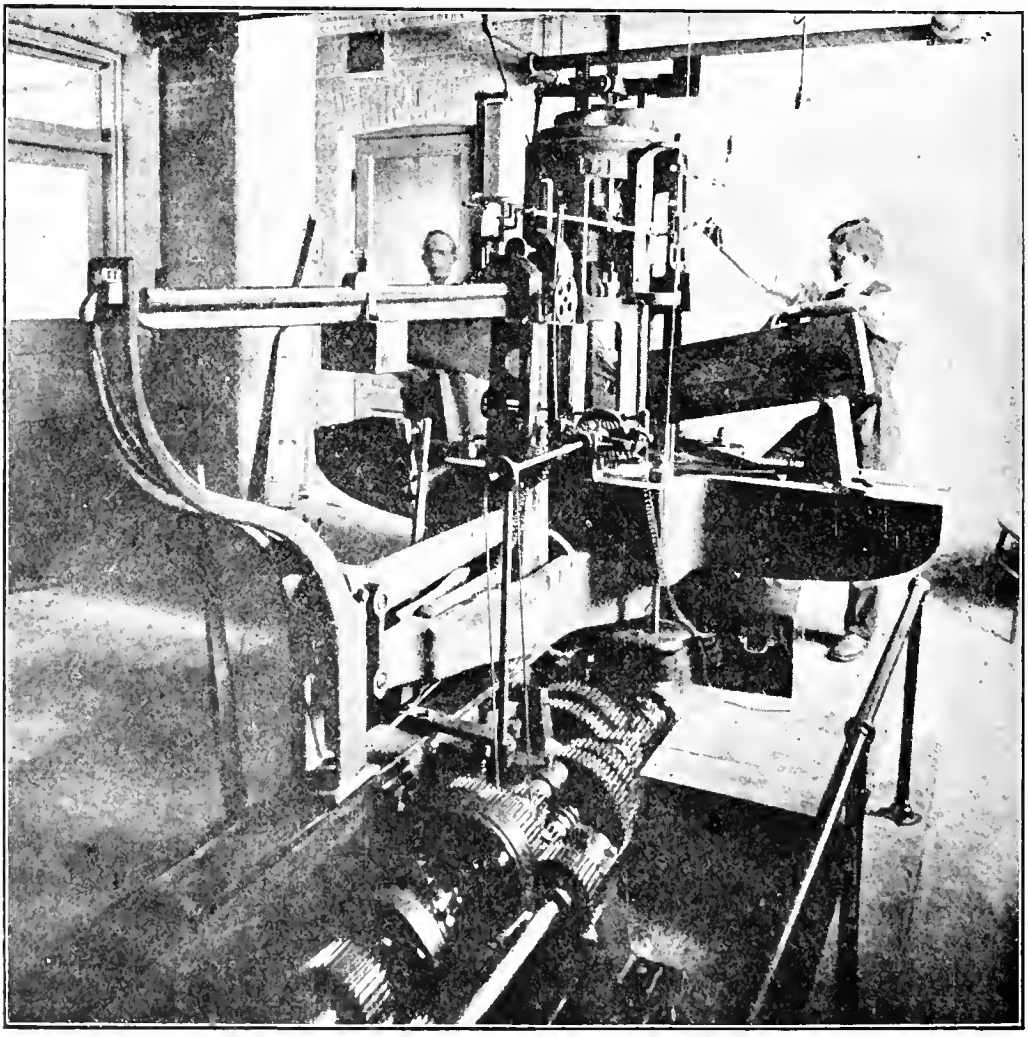
RAILWAY SURVEYING AND CONSTRUCTION—Preliminary and location surveys for railroads; practice in running in curves, spiralizing curves, setting slope stakes; calculation and measurement of quantities in excavation and embankment construction work, and culverts, track work, switches and crossings; practice in field methods.

Lectures, two hours per week; field and office work, three hours per week.

MASONRY CONSTRUCTION AND FOUNDATIONS—Foundations and earth pressure; principles and design of masonry retaining walls, dams, and arches; city pavements.



CEMENT TESTING LABORATORY



TESTING MACHINE—200,000 LBS. CAPACITY

Lectures, two hours per week.

HYDRAULICS—Principles of hydraulics; laws of flow through orifices and over weirs; laws of flow in open and closed channels; laws of flow through long pipes; calculation of discharge of pipes; sizes of pipes; methods of calculating discharge of streams and rivers; hydraulic motors and theory of turbines; calculation of water power.

Lectures, two hours per week.

MECHANICS AND STRENGTH OF MATERIALS—The elasticity and strength of engineering materials under different conditions; safe loads and stresses for these materials; shearing forces and bending movements in simple and continuous beams under uniform and concentrated loads; the application of this to the designs of beams and girders; investigation and design of long columns, shafts and pulleys; calculation of moments of inertia and radii of gyration.

GRAPHICAL STATICS—Principles and use of the force polygon, equilibrium polygon, and influence lines in the determination of stresses; reactions and moments for beams and elementary framed structures.

Lectures and class work, two hours per week.

CEMENT TESTING—Preparation of specimens for testing; determination of fineness; specific gravity, tensile strength, normal consistency, time of setting, soundness, compressive transverse and torsional strength; effect of temperature.

Laboratory work, three hours per week (First term).

Opportunity is given for research or advanced work.

MATERIAL TESTING—Tensile, compressive and transverse strengths of iron, steel, timber, brick and stone; calculation of fibre stresses; elastic limit and coefficient of elasticity.

Laboratory work, three hours per week (Second term).

MINERALOGY—Crystallography, elementary course in physical, chemical and descriptive mineralogy, with practical exercises in the determination of the more common mineral species; blowpipe analysis. (See page 112.)

Lectures, two hours per week (First term).

GEOLOGY—Outlines of physical and historical geology. (See page 112.)

Lectures, two hours per week; laboratory work, one hour per week.

MECHANICAL ENGINEERING—

(See Course 4 under Electrical Engineering, Third Year, page 151.)

Lectures, two hours per week.

METALLURGY—The metallurgy of iron and steel and its manufacture. (See page 114.)

Lectures, one hour per week.

PRACTICAL ASTRONOMY—

(See Course 11, page 103.)

Lectures, two hours per week.

Fourth Year

ROOF, TRUSS AND BRIDGE DESIGN—Calculation of stresses and design of wooden and iron roof trusses, highway and railway bridges, trestles, viaducts and arches.

Lectures, three hours per week; class work, six hours per week.

WATER SUPPLY AND IRRIGATION—Relation of rainfall to run-off from drainage areas; storage of water from drainage areas; reservoirs; calculation of water supply for cities and irrigation purposes; quality of water and relation to disease; distribution systems and plants; filtration and purification.

Lectures, three hours per week (one term only); class work, three hours per week (one term only).

SEWERAGE AND SEWERAGE PURIFICATION—Elements of sanitary engineering; design and construction of sewerage systems; separate and combined systems; size and discharge of sewers.

Lectures, three hours per week (one term only); class work, three hours per week (one term only).

RAILWAY ECONOMICS—Organization and financing of railway companies; effect of grade, curvature and distance on the operating expenses; relation of operating expenses to gross revenue and fixed charges; relation of probable traffic to population; costs of betterment of existing lines in relation to saving in operating expenses and increase in gross revenue.

Lectures, two hours per week (First term).

REINFORCED CONCRETE CONSTRUCTION—General theory of reinforcement; reinforced beams, columns, arches and retaining walls.

Lectures and class work, three hours per week (First term).

WATER-POWER DEVELOPMENT—Reconnaissance of water power; structures and equipment; value of project.

Lectures, two hours per week (Second term).

GEODESY—Objects of geodetic surveying; triangulation systems; base line and measurement stations; measurement and adjustment of angles; trigonometric and precise levelling; projection of maps.

Lectures, two hours per week.

ELEMENTS OF ELECTRICAL ENGINEERING.—A general treatment of the elementary considerations involved in problems relating to the generation, transmission and utilization of electrical power and an accompanying course of laboratory instruction, consisting of tests and experiments with continuous and alternating current machinery, designed to verify the laws of electricity and mag-

netism and to familiarize the student to some extent with the characteristics and limitations of the various types of machines to be met with in practice.

Lectures, two hours per week.

Laboratory, one period per week.

Summer Theses.

Students of the First, Second and Third Years will be required to prepare during the summer following each of these years a thesis describing in detail some piece of engineering work or structure, or describing any work with which they have been connected during the vacation.

These theses must be submitted to the Professors of Engineering on or before October 15th.

Graduation Thesis

Every student of the Fourth Year is required to prepare a design, with adequate drawings, of some engineering work or enterprise, or to complete an original research on some material of construction.

The subjects of these theses are to be submitted for approval to the Professors of Engineering not later than January 15th, and the completed reports must be handed in on or before April 15th.

Equipment.

Surveying Instruments—The University has the following equipment of surveying instruments:—

Buff & Buff Transit, with stadia wires, gradienter and solar attachment.

Cooke Transit Theodolite, stadia wires and attachments.

K. & E. Transit, stadia wires and attachments.

K. & E. Extra Fine Light Mountain Transit.

Watts' Latest Pattern Transit.

Dietzgen Mountain Transit.

Dietzgen 6″ Transit.

5″ Dominion Land Surveyor's Transit.

Buff & Buff Dumpy Level.

Buff & Buff 18″ Y Level.

Cooke Reversible Level.

Stanley New Pattern Level.

K. & E. 18″ Y Level.

Watts' Y Level.

Railway Compass, 4″ Compass and Prismatic Compass.

Pocket Sextant and Sextants reading to 10 seconds.

Plane Table, Current Meter, Levelling Rods, Pickets, Chains, Tapes, Hand Levels, Stadia Rods, Slide Rules, Planimeter, Pantagraphs, Three-armed Protractor, etc.

Material Testing Laboratory.—This laboratory is equipped with a large Testing Machine of 200,000 lbs. capacity, a Riehle Yale Extensometer, a Compressometer, a Transverse Indicator, and all the necessary tools for tensile, compressive, transverse and shearing tests. The machine is especially designed so that it can make transverse tests on beams eight feet long. It is both automatic and autographic, and is driven by an eight-horsepower 500-volt direct current motor. The machine is used for testing the strength of iron, steel, wood, stone, brick, concrete and reinforced concrete used in engineering structures.

The laboratory also contains a machine for testing abrasion and for the preparation of specimens.

Cement Laboratory.—This laboratory is equipped with all the apparatus for making the usual commercial tests on hydraulic cements.

The apparatus includes a Riehle Shot Testing Machine, a Riehle Automatic Beam Testing Machine for making tensile, compressive, transverse and torsion tests; briquette moulds, sand and cement sieves, Vicat needle apparatus and Gillmore needles, balances, moist closet, immersion tanks, mixing tables,

steaming and boiling apparatus, drying oven, volumenometers, specific gravity apparatus and other accessories. The beam testing machine is run by a three-phase 60-cycle motor, and is also provided with batteries for automatic record.

Drawing Models and Blue Print Room.—Several models have been made especially to order for use in Projection and Descriptive Geometry, while more are being ordered.

The blue print room has a large blue print frame supported by a carriage, so that the frame can be turned in any direction or at any angle.

Provision is made for washing and drying blue prints, as well as for preparing same, if necessary.

COURSE IN ELECTRICAL ENGINEERING

The Matriculation requirements, and the courses of instruction in the first two years, are the same as those in Civil Engineering.

Third Year

1. *Continuous Currents and Continuous Current Machinery*—

A course of lectures on the flow of continuous currents in circuits of various kinds, the laws governing the growth and decay of such currents, the laws of magnetism, and the application of these laws and principles to the design and operation of direct current machinery.

Two lectures per week.

2. *Continuous Current Laboratory*—

Combined with course number one, there will be a course of practical work in the laboratory, in which students will be trained in the use of electrical machines of different types, and the various methods of testing electrical machinery to determine the uses to which they may be put and their limitations.

CONTINUOUS CURRENT ELECTRICAL LABORATORY

Two laboratory periods per week of two hours each.

3. *Machine Design*—

A course of lectures on the application of the principles of the strength of materials to the design of bolts, rivetted joints, shafts, bearings and simple machine parts.

Two lectures per week.

4. *Mechanical Engineering*—

A course of lectures on power plants, covering fuels and combustion, steam boilers, steam engines, steam turbines, condensers, feed water heaters, and auxiliaries, gas engines, gas producers and the general considerations involved in the design and economical operation of power plants and the selection of equipment.

Two lectures per week.

5. *Mechanical Drawing*—

A course in design and drawing of machines and their parts, working drawings, assembly drawings, etc.

Three hours per week in draughting-room.

6. *Physics*—

An advanced course in electrical measurements, including the use of electrical standards, the principles of electrical instruments, measurements of capacity, self induction, testing of storage cells, etc. (See Course 8, page 108.)

One lecture and three hours in laboratory per week.

7. *Strength of Materials*—

A course of lectures descriptive of the various materials used in engineering structures, such as hydraulic cement,

mortar, brick, stone, timber, iron and steel, their properties, manufacture and cost, the elasticity and strength of these materials under different conditions, safe loads, stresses, and the design of beams, girders, columns, etc.

Two lectures per week.

8. *Graphical Statics*—

Principles and use of the force polygon, equilibrium polygon, and influence lines in the determination of stresses, reaction and moments for beams and elementary framed structures.

Two hours per week, lectures and class work.

9. *Hydraulics*—

Principles of Hydraulics, laws of flow through orifices over weirs and in open and closed channels, laws of flow through long pipes, calculation of discharge of pipes, size of pipes, methods of calculating discharge of streams and rivers, hydraulic motors, and theory of turbines, calculation of water power.

Two hours per week.

10. *Material Testing Laboratory*—

Tensile, compressive and transverse strengths of iron, steel, brick and stone. Calculation of fibre stresses, elastic limit, and co-efficient of elasticity.

11. *Mathematics*—

Differential equations.

Two hours per week, First Term.

Visits to Electrical Plants.

A series of visits to electrical power plants and industries where electricity is used, will be made under the guidance of the professor of Electrical Engineering, in order that the student may become familiar with the methods of using electricity in actual commercial practice.

Summer Thesis.

In the summer holidays each student will be required to prepare a complete set of drawings of some electrical power plant, or to write a thesis on the electrical equipment of some industry.

Summer Work.

Students are strongly recommended to spend their holidays at electrical or mechanical engineering work of some kind, and the value of such work will be recognized in the final estimate of the student's qualifications for the degree.

Fourth Year.

The following is a description of the courses of lectures and laboratory work to be taken by students in the fourth year:—

1. *Alternating Currents and Alternating Current Machinery*—

A course of lectures involving a study of the flow of alternating currents in circuits containing resistance reactance and capacity, separately and combined, and the application of these laws to the design of alternating current machinery.

Three lectures per week.

2. *Alternating Current Laboratory*—

A course of experimental work with alternating current motors, single phase and polyphase, generators, transformers, meters of various types, and other alternating current apparatus. The student in this course will be instructed to investigate certain characteristics of machines and will be trained to use his own initiative as far as is possible in determining the methods to be pursued.

Three laboratory periods per week of two hours each.

3. *Designing*—

Details and assembly drawings of, and full calculations involved in the design of alternating current apparatus, such as motors, transformers, generators, etc.

Three hours per week in draughting-room.

4. *Electric Lighting and Power Distribution*—

Design of lighting and power systems, including generating plant, distributing and transmission lines, and the application of power to illumination and industrial purposes.

Two lectures per week. First Term.

5. *Electric Traction*—

A course involving track and overhead construction for electric railways, city and suburban, determination of power required to draw cars under various conditions of track, curves, grades, etc.

Two lectures per week. Second Term.

6. *Hydraulic Machinery*—

A course of descriptive lectures on hydraulic machinery, pumps, turbines, governors, etc.

One lecture per week. Second Term.

7. *Machine Design*—

A course of lectures on the design of belts, rope drives, pulleys, engine details, fly wheels, valves, etc.

Two lectures per week. First Term.

8. *Mechanical Engineering*—

The laws of Thermodynamics, the properties of steam, saturated and superheated, the indicator, and the elementary theory of steam and other heat engines.

Two lectures per week. Second Term.

9. *Electro-Chemistry*—

A descriptive course of lectures covering the elementary principles. (See Course 5, page 114.)

One lecture per week.

10. *Power Development*—

Reconnaissance of water power, structures and equipment, value of project.

Two lectures per week. Second Term.

12. *Thesis*—

During the latter part of the second term the time allowed for laboratory work will be devoted to some original investigation, the results of which will be presented as a thesis at the end of the session.

ELECTRICAL LABORATORIES

Continuous Current Laboratory—

This laboratory has been equipped to enable the students in the shortest possible time to perform a large number of tests and investigations. A 30 horse-power, 20 kilowatt motor-generator takes alternating current from the Winnipeg Electric Railway Company's system and converts it into direct current at 110 volts for use in the laboratory. A number of machines of various types are used, among which may be mentioned the following: a 7 horse-power, 110 volt, Western Electric, auxiliary pole, variable speed motor; a 3 horse-power, 110 volt, Westinghouse, type "R" series motor; a 6 kilowatt, 125 volt, Westinghouse, compound wound, type "S" generator; a 4 kilowatt, 110 volt, Edison bipolar generator, and a 2 kilowatt, 125 volt, General Electric, compound wound generator. The laboratory is also supplied with a number of Weston ammeters, voltmeters, tachometers, etc., and the necessary switching and controlling apparatus and instrument tables.

Standardizing Laboratory—

The standardizing laboratory has been equipped with a "Leeds Northrup" potentiometer with multipliers, shunts, galvanometer and two Weston standard cells. Two Kelvin balances have also been installed, a "Composite" and a "Deci-ampere." For obtaining steady readings of current and voltage for calibrating purposes, seventy-five three-quarter ampere and six twenty-five ampere storage cells are being installed.

Alternating Current Laboratory—

An alternating current laboratory is now being equipped for the work of the fourth year students. In this laboratory there will be revolving field and revolving armature alternators, a rotary convertor, induction motors, single and polyphase, transformers, and all the instruments, loading and switching devices necessary to enable the student to become thoroughly familiar with the characteristics of the various types of machines and the methods of investigating them.

Donations

The following instruments and other pieces of apparatus have been presented to the department for use in the laboratories:

From the Canadian Westinghouse Company:

Three two-glower Nernst lamps.

One 110 Volt Direct Current Arc Lamp.

One 5 Ampere, 110 Volt Direct Current Wattmeter.

From the Town of Kenora:

One Crocker-Wheeler Rotary Transformer.

Two Thompson Integrating Wattmeters.

Two Wright Maximum Demand Indicators.

Two Induction Type Meters.

One Lacey Maximum Current Controller.

From the Weston Electrical Instrument Co.:

One Ammeter, Range, 75 Amperes.

One Voltmeter, Range, 300 Volts.

Miscellaneous Curricula

CURRICULUM IN LAW

A candidate for the Degree of Bachelor of Laws must:—

1. Have presented documentary evidence to the Registrar that he is a Bachelor of Laws, or Bachelor of Civil Law, of some recognized University in His Majesty's Dominions; or

2. Have passed the Matriculation Examination hereinafter mentioned, or have presented documentary evidence to the Registrar that he has passed the Primary and First intermediate Examinations of the Law Society of Manitoba; or of such other Law Society as the Board of Studies may from time to time recommend;
and

(a) Thereafter have passed in separate years the subjects hereinafter laid down for examination;

(b) Be of the full age of twenty-one years.

Any person who is a graduate in Arts of any University in His Majesty's Dominions, or who has been admitted a Barrister or Solicitor by the Law Society of Manitoba, or by any Law Society recognized by the University of Manitoba, may enter the Faculty of Law at the Second Year's Examination.

Matriculation Examination.

The subjects of this Examination shall be the same as those for the Matriculation Examination in Arts in the University of Manitoba, and the same standard shall be required to entitle the candidate to pass. (See pages 24 to 33.)

First Year.

1. Creighton.—Logic.

2. Stout.—Psychology.

3. Bagehot.—English Constitution.

4. O'Sullivan's Canadian Manual.—Civil Polity.

5. Taswell-Langmead.—Constitutional History.

6. Williams.—Real Property.

7. Anson.—Contracts.

8. Deans.—The Student's Legal History.

9. Street.—Foundations of Legal Liability, Vol. I. (Tort.)

Second Year.

1. May.—Constitutional History.

2. Todd.—Parliamentary Companion for the Colonies.

3. MacKenzie.—Roman Law.

4. Best.—Law of Evidence.

5. Ratcliffe and Miles.—Cases Illustrating Principles of the Law of Torts.

6. Leith.—Blackstone (Armour's Edition).

7. Dicey.—Conflict of Laws.

8. Snell.—Equity.

9. Street.—Foundations of Legal Liability, Vol. II. (Contract).

Final Year.

1. Clement.—The Law of the Canadian Constitution.

2. Hall.—International Law.

3. Holdsworth.—A History of English Law, Vol. I.

4. Broom.—Constitutional Law.

5. Maine's Ancient Law.—Jurisprudence.

6. Smith.—Mercantile Law, Vol. I.

7. Dicey.—The Law of the Constitution.

8. Street.—Foundations of Legal Liability, Vol. III. (Actions).

The percentages required in the Examinations in Law shall be the following: 34 per cent. on each subject; 50 per cent. on the total.

Supplemental Examinations in Law will be allowed to those students who fail in not more than two subjects, providing their average on the whole examination reaches 50 per cent. of the total marks given; such supplemental examinations must be passed as provided in the case of conditioned students in Arts.

On the successful completion of this course, the degree of LL.B. shall be conferred upon candidates.

The time of the examination shall be the same as that of the examination in Arts in each year.

All degrees in Law shall be conferred by the Council at its regular meetings, or at meetings specially called for that purpose.

CURRICULUM IN PHARMACY

Matriculation.

Candidates for the degree of Bachelor of Pharmacy must either:

1. Have passed a Matriculation Examination accepted by the University of Manitoba; or

2. Be the holders of such other certificates as in the opinion of the University may be equivalent thereto;

and have complied with the other requirements hereinafter specified.

Regulations.

A—Undergraduates resident in the Province of Manitoba must have complied with all the requirements prescribed from time to time by the Council of the Pharmaceutical Association of Manitoba for admission to examination for the diploma licensing to practice Pharmacy in Manitoba.

B—Undergraduates not resident in the Province of Manitoba:—

(1) Must have devoted at least four years (not being engaged in any other business) to the study of Pharmacy, being apprenticed during that time, to a regular Pharmaceutical Chemist.

(2) Must have attended a full course of lectures, embracing all the subjects of the curriculum, the length of each course being not less than that required from time to time by the Council of the Pharmaceutical Association of Manitoba, and including practical work at some College of Pharmacy recognized by this University.

All candidates who have, prior to June 1, 1905, received the diploma of the Manitoba College of Pharmacy, shall not be required to conform to the above, but shall be allowed their degrees on passing the examination in the subjects hereinafter given.

Examinations.

Candidates for the degree must pass an examination to be held in the month of May of each year, and must present to the Registrar of the University certificates covering all the requirements relating to undergraduates as given above.

The subjects for this examination shall be as follows:

(a) Botany, with use of the microscope.

(b) Theoretical and Practical Chemistry.

(c) Physics as outlined for students of Third Year in Arts.

(d) Materia Medica, and Toxicology.

(e) Theory and Practice of Pharmacy, including interpretation of Prescriptions and Dispensing.

These examinations shall be partly written, and partly practical.

No candidate shall be considered as having passed the examination who has not obtained 67 per cent. of the marks allotted; nor shall a candidate be considered as having passed in any subject who has not obtained at least 50 per cent. of the marks allotted to such subject.

Fees.

For Matriculation or registration of Matriculation	$ 5 00
For Tuition (each course of study)	8 00
For annual Examination	8 00
For the Degree of Phm. B.	10 00

The course of studies leading up to License in Pharmacy, and the regulations concerning length of apprenticeship, etc., as outlined in the Announcement of the Manitoba College of Pharmack for 1904-5, are in the meantime approved.

All candidates for the degree of Bachelor of Pharmacy must attend University lectures and pass the University Examination in Botany of the First Year, Theoretical Chemistry of the Second Year, and Physics of the Third Year in Arts.

CURRICULUM IN COMMERCIAL EDUCATION

Candidates for the Diploma in Commercial Education must either:—

1. Have passed the Matriculation Examination required by the University of Manitoba; or

2. Be the holders of such other certificates as in the opinion of the University may be equivalent thereto;

and have complied with the other requirements hereinafter specified.

Matriculation.

Candidates for this examination shall take the following fixed subjects:

English,
History,
Mathematics;

and any two of the following options:

Latin,
French,
German.

The requirements in each of these subjects shall be the same as those for the Matriculation in Arts, and the same standard shall be required to entitle the candidate to pass. (See pages 24 to 33.)

After fulfilling the requirements in reference to the Matriculation Examination, the candidate shall complete a course of two years' duration. A diploma shall be given to those who are successful in passing examination in the prescribed subjects.

First Year Examination.

1. English.—as of the First Year in Arts.

2. French or German.—as of the First Year in Arts.

3. Modern History and Geography. "Colonies and Colonial Federations," ed. E. J. Payne. (Macmillan & Co. The English Citizen Series.)

4. Economic History—Clive Day—"History of Commerce."
5. Political Economy—Seager—"Introduction to Economics."

Second Year Examination.

1. English,—as of the Second Year in Arts.

2. French or German,—as of the Second Year in Arts.

3. Political Economy,—J. S. Mill—"Principles of Political Economy." (Ed. Ashley, 1909.)

4. Commercial Law and Science.

The time of the examinations shall be the same as that of the examinations in Arts in each year.

CURRICULUM IN AGRICULTURE

Provision has been made for an advanced course leading to a degree in Agriculture by the adoption in the University Council of the following regulations:

(a) A degree shall be granted in Agriculture, to be called Bachelor of Science in Agriculture (B.S.A.).

(b) The course leading to the B.S.A. degree shall extend over a period of five years of five months each.

(c) A candidate to gain admission to the Third Year must hold a diploma from the Manitoba Agricultural College or its equivalent, and must have satisfied the Faculty of that institution as to his ability to proceed.

(d) After completing the first three and a half years of the full course a student may proceed to the degree of B.S.A. by specializing in one of the following courses:

MANITOBA AGRICULTURAL COLLEGE

(1) Field Husbandry and Animal Husbandry.

(2) Dairying.

(3) Agricultural Engineering.

(e) Students taking the course in Field Husbandry and Animal Husbandry must spend between the Second and Fifth Years of their course at least six months during the summer in practical work on a farm, and those taking the course in Dairying, one summer in practical work in a creamery or cheese factory.

(f) The following subjects will be given in the course in Agricultural Engineering: Plane Geometry; Algebra up to the end of quadratic equations; advanced forge work along machinery repair lines; machine shop practice on drill, lathe, planer, etc.; mechanical drawing; study and testing of power machinery and implements; practical work with firms handling agricultural implements and traction engines in the city. Students will be required to spend the summer vacation between the Fourth and Fifth Years with some agricultural implement firm or in some other work bringing them in touch with agricultural machinery, that may be approved by the professor of Agricultural Engineering.

(g) The examinations of the Third, Fourth and Fifth Years of the course in Agriculture shall be conducted by the University.

N.B.—For detailed outline of the course in Agriculture, see the calendar of the Manitoba Agricultural College.

EXTENSION COURSES

I. ENGLISH.

A course of some twenty-five lectures in English Literature is given by Professor A. W. Crawford on Saturday mornings, at 10 o'clock, throughout the session. It is intended especially for teachers and students of the Provincial Normal School, but is open to all others who are qualified to do the work. It consists of exposition, interpretative readings and discussions of the methods of teaching literature. Each year one or more great authors will be studied and the courses are so arranged in rotation that they will furnish a comprehensive acquaintance with the best English literature to those who follow them for a number of years. The following indicates the range of work:

1910—SHAKESPEARE: Romeo and Juliet; Hamlet; Macbeth; Antony and Cleopatra; The Merchant of Venice; Julius Caesar; As You Like It; The Tempest.

1911—TENNYSON (The Macmillan Co., 50c): Dream of Fair Women; The Lotus Eaters; Ulysses; The Two Voices; The Palace of Art; The Vision of Sin; The Princess; Break! Break! Break!; In Memoriam; Idylls of the King, (a) The Coming of Arthur, (b) Gareth and Lynette, (c) Launcelotte and Elaine; (d) The Holy Grail, (e) Guinevere, (f) The Passing of Arthur.

BROWNING (Crowell & Co., 50c): My Last Duchess; The Flight of the Duchess; By the Fireside; Pictor Ignotus; Fra Lippo Lippi; Andrea del Sarto; The Bishop Orders His Tomb; How it Strikes a Contemporary; Abt Vogler; Prospice; A Grammarian's Funeral; An Epistle of Karshish; Caliban Upon Setebos; Rabbi Ben Ezra; Old Pictures in Florence.

1912—CHAUCER (Clarendon Press): Canterbury Tales, (a) The Prologue, (b) The Knight's Tale.

SPENSER (Clarendon Press): The Faerie Queene, Book I.

MILTON (Globe Edition): L'Allegro; Il Penseroso; Comus; Lycidas; Paradise Lost, Books I-IV.

(NOTE.—The Department of Education accepts from women students, holding Second-class Teachers' Certificates, a satisfactory examination on the above course, in lieu of the Mathematics ordinarily prescribed for the First-class Teachers' Non-Professional Examination. In such cases candidates are given papers, reviewing the Mathematics prescribed for the Second-class Teachers' Non-Professional Examination.)

II. POLITICAL ECONOMY.

An evening course of some twenty-five lectures on Political Economy will be given by Professor A. B. Clark on a day and at an hour to be announced. It is especially designed to meet the needs of teachers, bankers, lawyers, accountants and others engaged in business in the city.

The lectures will include a discussion of the leading principles of Political Economy and their application to present day problems of industry and commerce, as in the following synopsis:—

1. INTRODUCTORY.—Character and Scope of Political Economy; Wealth; Economic Laws; Relation of Economic Science to Practice.

2. PRODUCTION.—Its Essence; Its Relation to Consumption; Law of Diminishing Utility; Agents of Production—Nature, Labor, Capital; Causes Determining the Productiveness of Industry; Laws of Diminishing and Increasing Return; Growth of Material Capital.

3. DISTRIBUTION.—Private Property; Property in Land; Socialism; Wages, Interest, Profits, Rent; Influence of Trade Unions and Trusts.

4. EXCHANGE.—Theory of Value, Demand and Supply, Market and Normal Value, Relation of Rent to Value, Monopoly Value; Money—Its Functions, Standard and Token Money, Mint Price and Market Price of Gold, Gresham's Law; Money and Prices—The Quantity Theory; Inconvertible Paper Currency; Credit—Its Forms and Its Basis; Banking—Its Historical Development, Regulation of Bank Note Issues, Deposit Banking, The Money Market, The Reserve, The Rate of Discount, The Foreign Exchanges, Commercial Crisis; Theory of International Trade and International Values; Free Trade and Protection.

5. The Economic Functions of Government.—Grounds and Limits of *Laisser Faire*; Public Finance—Taxation and Expenditure.

The lectures will form in themselves a course independent of any text book; but Walker's *Political Economy,* or Seager's *Introduction to Economics,* will be found useful for supplementary reading. References to these works, and others in special departments of Economics, will be given, from time to time, throughout the course.

Other Extension Courses will be offered from time to time as the facilities for them are provided and the need arises.

LOCAL LECTURES.

The members of the University Faculty stand ready to give a number of single lectures or short courses of lectures on literary or scientific subjects, on request, in the City of Winnipeg, or at local points outside, whenever the arrangements for such lectures do not conflict with the routine duties of University work. No charge is made for these lectures, but those arranging for them must pay the travelling and hotel expenses of the lecturers.

A pamphlet giving a list of available subjects, etc., will be issued shortly and may be obtained on application from the Registrar.

General Regulations

GENERAL REGULATIONS

REGISTRATION.

All undergraduates in Arts, Medicine and Agriculture, in attendance at the various Colleges, whether attending lectures in the University Building or not, shall register, each year of their course, with the Registrar of the University, within two weeks after entering College. Any student who neglects to register within two weeks after entering College may be subject to a fine of $2.00.

EXAMINATIONS.

Undergraduate Examinations.

1. The regular University Examinations for undergraduates in Arts, Engineering, Law and Medicine, and Agriculture, begin on the third Monday in April, in each year.

2. Examinations in Arts up to the end of the Second Year, and in Law, may also be held at such outside centres in Manitoba, Saskatchewan, Alberta and British Columbia, as the Board of Studies may from time to time approve of; it being understood that this does not apply to the practical examinations in Arts, where such are required.

Wherever in the Provinces of Manitoba, Saskatchewan, Alberta and British Columbia, incorporated colleges have been, or may be established, the University of Manitoba, on being satisfied that their buildings are sufficient, and that the staff is competent to give instruction in the Arts course, in whole or in part, may give recognition to such institution, and on arrangements being made by candidates or otherwise to meet the necessary expenses, grant examinations to such institutions, and give university standing to successful candidates.

Matriculation Examinations.

1. The Examinations for Matriculation into all Faculties are held twice in each year, beginning on the fourth Monday in May and on the third Thursday in September.

2. The examination in May is held in Winnipeg, and on application at the following centres in connection with the College, Collegiate Institute or High School as the case may be: Portage la Prairie, Carberry, Brandon, Virden, Neepawa, Carman, Selkirk, Morden, Minnedosa, Melita, Souris, Boissevain, Deloraine, Altona, Stonewall, Dauphin, Regina, Calgary, Edmonton, Prince Albert, Vancouver, and Victoria, and at such institutions as may from time to time be approved of by the Board of Studies.

3. *The September Examination is held at the University Building only.*

4. Application for a Local Examination shall be made to the Registrar of the University by the trustees or other authorities of a college or school, at least six weeks before the date of examination in each year.

5. The presiding examiner or examiners at each centre shall be appointed by the Board of Studies. Where the number of candidates exceeds fifteen there shall be at least two presiding examiners.

6. The fee for the presiding examiner or examiners at a centre shall be $2.00 per half day each, and this fee and such other expenses as may be incurred in connection with the local examination shall be paid by the authorities of the school or college on whose application the examination is held.

Supplemental Examinations.

1. Supplemental examinations are allowed those candidates in Arts, Engineering or Agriculture or in Parts I. and II. Matriculation (any faculty) who have failed in not more than three papers, and to those candidates in Medicine, Law, or Part I. Matriculation (any faculty), or Part II. Matriculation (any faculty), who have failed in not more than two papers, always provided that their average on the whole examination is such as will admit of their being granted Third Class standing, viz.:

(a) For Matriculation (any faculty), 40 per cent.

(b) For Arts and Agriculture, 40 per cent.

(c) For Law, Medicine and Engineering, 50 per cent.

2. The fee for such revision is $4.00 for one or two papers, and $2.00 for each additional paper. This fee is payable at the time the appeal is made and is not returnable in case the original marking is not sustained.

3. There is no special form of application for such revision.

Conditioned Students.

1. Candidates for matriculation into the faculties of Arts, Law and Engineering, who have failed in not more than two papers, or, having failed in three, have at a subsequent supplemental examination, passed in at least one of them, and candidates for matriculation into the faculty of Medicine, who present teachers' certificates not covering Latin, may as conditioned students proceed with their course with the view of subsequently obtaining full undergraduate standing. This regulation is subject to the limitations laid down in 3 below.

2. Candidates with undergraduate standing, who have failed in not more than two papers at the First, the Second or the Third Year examinations (or the Fourth Year examination in case of a five-year course), or who, having failed in three, have at a subsequent supplemental examination, passed in at least one of them, may as conditioned students proceed with their course with the view of subsequently obtaining full standing in their year. This regulation is subject to the limitations laid down in 3 below.

3. The following limitations are placed on the application of regulations 1 and 2 above:

(a) No student is allowed, even in the interval between the regular examination in the spring and the September examination, to have more than three conditions registered against him at any one time.

(b) Matriculation conditions must be removed before the commencement of the Second Year, First Year conditions before the commencement of the Third Year, Second Year conditions before the commencement of the Fourth Year and Third Year conditions before the commencement of the Fifth Year.

Equivalent Examinations.

1. The following examinations are accepted *pro tanto* by the University, in so far as the subjects and standing are, to the satisfaction of the Board of Studies, the same as, or equivalent to, those required by the University—but candidates offering certificates of having passed such examinations are required to make good their standing by passing in such subject or subjects not covered by their certificates, as may, in the opinion of the Board, be necessary for the completion of the examination for which such certificates are presented:

(a) Third Class Teacher's Examination for Manitoba.

(b) Second and First Class Teacher's Examinations for Manitoba.

(c) Second and First Class Teacher's Examinations for Saskatchewan and Alberta.

(d) Second and First Class Teachers' Examinations and the Junior and Senior Leaving Examinations for Ontario.

2. (a) Third Class Certificates shall be accepted *pro tanto* for subjects of Part I. of the Matriculation Examination.

(b) Second Class and Junior Leaving Certificates shall be accepted *pro tanto* for subjects of any Matriculation Examination.

(c) First Class and Senior Leaving Certificates shall be accepted *pro tanto* for subjects of the First Year in Arts and Part II. Engineering Matriculation.

3. Provincial or Departmental Certificates for any other provinces of the Dominion are granted such *pro tanto* standing as the Board of Studies may from time to time recommend.

4. Candidates presenting *pro tanto* certificates must attempt to pass at one time in all the subjects necessary to the completion of the entire examination.

5. Holders of certificates of educational value, other than those above mentioned, receive such recognition as the Board of Studies may from time to time recommend.

6. Students of recognized colleges, who are matriculated in this University, may pursue their course of study in said college and may come up to the University examinations as students of said college.

Admission Ad Eundem Statum and Ad Eundem Gradum.

Members of any other University in His Majesty's Dominions, who may apply for admission to this University, are not required to take the Entrance Examination of the Faculty to which they belong, but may be admitted *ad eundem statum* or *ad eundem gradum,* on presentation of their credentials and payment of the required fee.

ATTENDANCE ON LECTURES AND PRACTICAL WORK.

No student shall be allowed to present himself for examination in any subject in which class instruction is given, who does not present from the University Faculty, or from an affiliated college where such work is done in the college, a certificate of having attended 75 per cent. of the lectures delivered in that subject.

This regulation, however, shall not affect any non-collegiate candidates for examination in Arts, excepting in the case of the Special Courses in Natural and Physical Science, and in any other course or subject in which practical or laboratory work is required.

Courses in Medicine, Engineering and Agriculture may not be taken by non-collegiate students.

No student shall be allowed to present himself for examination in the above-mentioned science subjects or in mathematics unless he has satisfactorily carried out and recorded the minimum of practical work in each subject decided upon by the University Faculty, subject to the approval of the Board of Studies; the scheme of practical work to be announced at the beginning of each session. This regulation shall apply to all classes of students, whether of Arts, Engineering, or Medicine, doing practical work under the direction of the University Faculty.

PRIZES AND SCHOLARSHIPS

The Prizes and Scholarships hereinafter mentioned are provided from the endowment fund presented to the University in accordance with the will of the late Dr. A. K. Isbister.

Matriculation, Part I.

PRIZES shall be awarded to pupils of any school in the Province as follows:

(a) These prizes, to be called Isbister Prizes, shall be five in number, of the value of twenty dollars each, and shall be awarded on the aggregate of the marks of all papers on the fixed subjects of Part I. of the Matriculation Examination in Arts of the University of Manitoba.

One of these prizes shall be awarded to French-speaking students. In the event, however, of no French-speaking student qualifying for a prize, all five prizes may be awarded to English-speaking candidates.

(b) Any successful candidate for one of these prizes must send in to the Registrar of the University a certificate of his having been in attendance at a public or private school, not being an affiliated college, in the Province of Manitoba, for the greater part of the preceding school year.

SCHOLARSHIPS shall be awarded to students of the University as follows:

Matriculation, Part II.

(a) At Part II. of the MATRICULATION Examination, four scholarships of sixty dollars each shall be awarded on the Latin and Mathematical papers of the examination.

Two scholarships of forty dollars each shall be awarded to English-speaking students on English, and one scholarship of forty dollars to French-speaking students on French.

One scholarship of thirty dollars shall be awarded on Greek.

One scholarship of thirty dollars on the French and German papers of the course for English-speaking students of the examination.

The successful candidate for a scholarship in this examination must pass in each of the additional subjects required of him other than those in which he takes a scholarship in said examination, and must obtain 50 per cent. of the aggregate marks of his whole examination.

First Year, Arts.

(b) At the Examination of the First Year in Arts, four scholarships of sixty dollars each shall be awarded on the Latin and Mathematical papers of the examination.

Two scholarships of forty dollars each shall be awarded to English-speaking students on the papers in English, and one scholarship of forty dollars to French-speaking students on the papers in French.

One scholarship of forty dollars on the Greek papers of the examination.

One scholarship of forty dollars on the French papers of the course for English-speaking students of the examination.

One scholarship of forty dollars on the German papers of the course for English-speaking students of the examination.

One scholarship of forty dollars on the papers on Biology.

One prize of twenty dollars shall be awarded to English-speaking students, and one prize of twenty dollars to French-speaking students on the History paper of the examination.

One prize of twenty dollars on the papers in Icelandic.

The successful candidate for a scholarship in this examination must pass in each of the additional subjects required of him other than those in which he takes a scholarship in said examination, and must obtain 50 per cent of the aggregate marks of his whole examination.

Second Year, Arts.

(c) At the Examination of the SECOND YEAR in Arts, four scholarships of sixty dollars each shall be awarded to English-speaking students on the English, Philosophy, Latin and History papers of the Examination, and one scholarship of sixty dollars to French-speaking students on the French, Philosophy, Latin and History papers of the examination.

One scholarship of forty dollars shall be awarded on each of the following subjects of the examination:—

Greek, English, French (for English-speaking students), English (for French-speaking students), German, Mathematics, Chemistry.

One prize of twenty dollars on the papers in Icelandic.

The successful candidate for a scholarship in this Examination must pass in each of the additional subjects required of him other than those in which he takes a scholarship in said Examination, and must obtain 50 per cent. of the aggregate marks of his whole examination.

Third Year, Arts.

(d) At the Examination of the THIRD YEAR in Arts, one scholarship of one hundred and fifty dollars and one of one hundred dollars shall be awarded on the papers of said examination in each of the following courses: (1) Classics; (2) Mathematics; (3) Philosophy (English); (4) Philosophy (Latin); (5) General Course; (6) Natural and Physical Science, Division A; (7) Natural and Physical Science, Division B; (8) Natural and Physical Science, Division C; (9) Natural and Physical Science, Division D. (In the General Course only the fixed subjects shall be taken into account.) One scholarship of one hundred and fifty dollars and one of one hundred dollars shall be awarded on the papers of the said examination in each of the following subjects or groups of subjects: (1) English; (2) French and German; (3) History; (4) Political Economy.

A Scholarship of thirty dollars shall be awarded in Hebrew of the Third Year.

Engineering.

(e) At the Examination of the First Year of the Civil and Electrical Engineering Course (common) a scholarship of forty dollars shall be awarded.

At the Examination of the Second Year of the Civil and Electrical Engineering Course (common) a scholarship of forty dollars shall be awarded.

At the Examination of the Third Year in Civil Engineering, one scholarship of one hundred and fifty dollars and one of one hundred dollars shall be awarded.

At the Examination of the Third Year in Electrical Engineering, one scholarship of one hundred and fifty dollars and one of one hundred dollars shall be awarded.

Law.

(f) At the Examination of the First Year of the LL.B. Course one scholarship of sixty dollars shall be awarded.

At the Examination of the Second Year of the LL.B. Course one scholarship of one hundred dollars and one of seventy-five dollars shall be awarded.

Medicine.

(g) Scholarships shall be awarded at the examination of the First, Second, Third and Fourth Years of the course for the M.D. degree. In each of the four years of the course there shall be awarded two scholarships of eighty dollars.

CONDITIONS GOVERNING THE PAYMENT OF SCHOLARSHIPS.

(a) On certification by the Chancellor and the Registrar or other person authorized by the Council, the several scholarships shall be paid by the Bursar of the University to the Bursar or Treasurer of each College, in moieties, on the second

Wednesday of December and May, except in the following cases:

The mode of payment of the scholarships awarded at the Second Year Examination in Law, at the Third Year Examinations in Arts and Engineering, and at the Fourth Year Examination in Medicine, shall be as follows: One moiety of the scholarship shall be paid in December of the Final Year and the second moiety on the third Thursday of May of the Final Year; but the latter portion shall not be paid unless the holder of the scholarship obtain first-class in his Final Examination.

(b) In the case of undergraduates the University requires before payment of the first moiety of the scholarships a certificate from the Head or Acting Head of the College that the student's attendance has been satisfactory up to the 8th day of December, and before the payment of the second moiety a similar certificate that the student's attendance has been satisfactory from January up ot the beginning of May. And it is declared that the attendance at the College to be required of a student shall be *actual attendance for the full term of such college,* except in so far as non-attendance for a limited period by any particular student may be excused by the college authorities on the ground of ill-health or other proper reasons.

Should the conditions in this section as to certification of a scholarship not be fulfilled during the two years immediately following the date of the taking of the scholarship, the scholarship shall lapse.

(c) A student shall not be qualified to hold a scholarship unless he is placed in the first-class in the aggregate of the subjects for which the scholarship is given, and unless he has passed in all the subjects required. In the case of the scholarships in the subjects English, French and German, History and Political Economy of the Third Year in Arts, the student receiving the same must also have gained first class standing in the course he is pursuing for the year.

(d) The values stated for the scholarships are the maximum values which the scholarships shall not exceed. If the funds do not allow of the scholarships being of such maximum value, then they shall be proportionately of such value as the funds will allow.

(c) No student shall hold more than one scholarship. If a student succeeds in gaining more than one scholarship in any year, he will be allowed to choose which one he will take, and his name will be entered upon the list as having gained the other, though not entitled to any of the funds; and such other scholarship shall be granted to the one ranking next to him.

SPECIAL PRIZES

I. CANADIAN HISTORY PRIZES.

(a) Two prizes, one of $30 and one of $20, are awarded to the candidates ranking first and second, respectively, in the Canadian History section of the paper in History of the Part I. Matriculation examination (any faculty), in May of each year. These prizes are the gift of the Canadian Club of the City of Winnipeg.

(b) A class prize, taking the form of pictures or other works of art, commemorative of Canadian history, is also offered by the Winnipeg Canadian Club to the class taking the highest average standing in Canadian History at the aforesaid examination. The precise conditions of this award are not yet determined and will be announced later.

II. THE DEAN'S PRIZES IN MEDICINE.

Two microscopes, the gift of Dr. H. H. Chown, Dean of Manitoba Medical College, are awarded to the two students of the Fifth Year in Medicine, who have obtained the highest standing on the aggregate marks of the five annual examinations of their course. (These prizes, having been awarded in 1910 to two students of the Fourth Year, these students are not eligible to receive them again in 1911 on completing their Fifth Year.)

TRAVELLING SCHOLARSHIP.

The sum of six hundred dollars will be given annually for the maintenance of a Travelling Scholarship, to be awarded under the following conditions:—

1. The object of the Travelling Scholarship shall be to assist students who have completed their Final Year in the University to pursue the special line of studies which they have selected, at some other University or seat of learning.

2. No student shall hold a Travelling Scholarship for a longer period than two years; and no student who has once held such scholarship shall be eligible for a second time.

3. Those eligible to compete for the scholarship shall be students who have graduated not more than twelve months previously, at the regular spring examination, in one of the special courses in Arts or in the course in Medicine or Engineering.

4. One Travelling Scholarship shall be offered for competition in every alternate year, or oftener if a scholarship be vacant; and the course in which it is offered shall be decided by rotation in the following order:—The special course in Classics, the special course in Mathematics, the special course in Modern Languages, the special course in English Philosophy, the special course in Latin Philosophy, the special courses in Science, the course in Medicine, the courses in Engineering. The course in which it is proposed to award it shall be announced in the Calendar of the year previous.

5. The scholarship shall be awarded to the student obtaining the highest marks at a special examination in the subjects of the selected course, the date and place of holding which shall be announced in the Calendar of the year previous. Provided always that the scholarship shall not be awarded to any student who shall not have (a) obtained first class standing at the special examination, and (b) obtained first class standing and have passed in all subjects of his final examination. If these conditions be not satisfied the scholarship may, if the Board of Studies deem it advisable, be offered under similar conditions in the subjects of the course next in rotation.

6. The place at which the successful student shall pursue his studies shall be selected by the student, subject to the approval of the Board of Studies.

7. The scholarship shall be of the yearly value of $600, and the amount shall be paid each year in two moieties; provided that the second moiety in each year shall not be paid until the student shall have spent at least three months in studying at the institution selected, and shall have produced a certificate from the authorities of the institution of his having made satisfactory progress.

The Special Scholarship Examination shall be held each year in May, beginning on the opening day of the Matriculation

(e) No student shall hold more than one scholarship. If a student succeeds in gaining more than one scholarship in any year, he will be allowed to choose which one he will take, and his name will be entered upon the list as having gained the other, though not entitled to any of the funds; and such other scholarship shall be granted to the one ranking next to him.

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The Special Scholarship Examination shall be held each year in May, beginning on the opening day of the Matriculation

Examination. Applications for this examination shall be forwarded to the Registrar thirty days in advance.

1911.

The scholarship will be awarded in this year in the Department of Mathematics. The examination will consist of the following papers:—

1. Synthetic Geometry (Plane and Solid).
2. Analytical Geometry (Plane and Solid).
3. Higher Algebra (including Theory of Equations).
4. Trigonometry (Plane and Spherical).
5. Infinitesimal Calculus and Differential Equations.
6. Statics and Particle Dynamics.

THE RHODES' SCHOLARSHIP.

By the Will of the late Hon. Cecil Rhodes a Scholarship of the value of £300 yearly, tenable at any college in the University of Oxford for three consecutive academical years, has been allotted to the Province of Manitoba.

Nominations to the Scholarship shall be made by a committee of five, to be named by the University of Manitoba.

Candidates for the Scholarship should, during the month of January, notify the Committee of Selection of their intention to present themselves for examination. The decision of the Committee of Selection shall be final as regards eligibility.

In order to be eligible for nomination to this Scholarship, candidates:

(a) Must be British subjects.

(b) Must have spent four years in Manitoba educational institutions, two at least of which must have been as registered undergraduates of the University of Manitoba.

(c) Must not be less than nineteen nor more than twenty-five years of age at the time of writing, and unmarried.

Prior to election a qualifying examination will be held. This examination is not competitive, but is intended to give assurance that all candidates are fully qualified to enter on a course of study at Oxford University.

It will therefore be based on the requirements for Responsions—the first public examination exacted by the University from each candidate for a degree.

The Rhodes Scholars will be selected from candidates who have successfully passed this preliminary examination.

The requirements for the Responsions examination, as stated in the Statutes of the University of Oxford, are as follows:

Candidates must offer the following:—

(1) Arithmetic—the whole.

(2) *Either* Algebra.

Addition, Subtraction, Multiplication, Division, Greatest Common Measure, Least Common Multiple, Fractions, Extraction of Square Root, Simple Equations containing one or two unknown quantities, and problems producing such equations.

Or, the Elements of Geometry.

Elementary Questions, including propositions enunciated by Euclid, and easy deductions therefrom, will be set on the subject-matter contained in the following portions of Euclid's Elements, viz.:—

Book I. The whole, excluding propositions 7, 16, 17, 21.

Book II. The whole, excluding proposition 8.

Book III. The whole, excluding propositions 2, 4 to 10, 13, 23, 24, 26 to 29.

Any method of proof will be accepted which shows clearness and accuracy in geometrical reasoning.

So far as possible, candidates should aim at making the proof of any proposition complete in itself.

In the case of propositions 1 to 7, 9, 10 of Book II., algebraical proofs will be allowed.

(3) Greek and Latin Grammar.

(4) Translation from English into Latin prose.

(5) Greek and Latin authors.

Candidates must offer two books, one Greek and one Latin or Unseen Translation. The following portions of the undermentioned authors will be accepted:—

DEMOSTHENES: De Corona.

EURIPIDES: Any two of the following plays: Hecuba, Medea, Alcestis, Bacchæ.

HOMER: (1) Iliad 1—5, or 2—6; or (2) Odyssey 1—5, or 2—6.

PLATO: Apology and Crito.

SOPHOCLES: Antigone and Ajax.

XENOPHON: Anabasis 1—4, or 2—5.

CÆSAR: De Bello Gallico, 1—4.

CICERO: (1) the first two Phillippic Orations; or (2) the first three Catiline orations, and In Verrem, Act I.; or (3) the Orations, Pro Murena and Pro Lege Manilia; or (4) the theatises, De Senectute and De Amicitia.

HORACE: (1) Odes 1—4; or (2) Satires; or (3) Epistles.

LIVY: Books V. and VI.

VERGIL: (1) the Bucolics, with Books 1—3 of the Æneid; or (2) the Georgics; or (3) the Æneid, Books 1—5, or 2—6.

The texts used in setting the examination papers will be those of the Series of Oxford Classical Texts, so far as these have been published by the Oxford University Press.

Papers covering this range of study will be prepared by examiners appointed by the Trustees, and will be sent to each

centre, where, at a date publicly announced, the examination will be held under proper supervision, and the papers returned to the examiners.

A list of those who have successfully passed this test will as soon as possible be furnished the committee of selection, and from this list the committee will proceed to elect the scholars.

The committee will also be asked to furnish to the Trustees as full a statement as possible of the school and college career of each elected scholar, with the special grounds of his appointment, together with suggestions, if desired, as to the course of study for which he is best fitted.

Any inquiries about Oxford, its colleges and the courses of study there, should be addressed to F. J. Wylie, Esq., the Oxford agent of the Rhodes Trustees.

Copies of Oxford Responsion papers for past years can be obtained from the Copp, Clark Company, Toronto. The Student's Handbook of Oxford can be ordered at the same address. It gives full information about the examinations of the University, subject to changes made since the last edition was issued.

"Oxford As It Is," a small pamphlet prepared by Mr. Louis Dyer, of Harvard and Balliol Colleges, for the use of American candidates, gives all essential information in a condensed form. It can also be ordered from the Copp, Clark Company, Toronto.

"Oxford and its Colleges," written by Mr. J. Wells, of Wadham College, and "Oxford and Oxford Life," edited by the same gentleman, may be recommended to those who wish to gain full information about the University and its Colleges.

Extracts from the Will of the Right Hon. Cecil John Rhodes:—

My desire being that the students who shall be elected to the scholarships shall not be merely bookworms, I direct that in the election of a student to a scholarship regard shall be had to (1) his literary and scholastic attainments; (2) his fondness of and success in manly outdoor sports, such as cricket, football and the like; (3) his qualities of manhood, truth,

So far as possible, candidates should aim at making the proof of any proposition complete in itself.

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courage, devotion to duty, sympathy for and protection of the weak, kindliness, unselfishness and fellowship; and (4) his exhibition during school days of moral force of character and of instincts to lead and to take an interest in his schoolmates; for those latter attributes will be likely in after life to guide him to esteem the performance of public duties as his highest aim. As mere suggestions for the guidance of those who will have the choice of students for the scholarships, I record that (1) my ideal qualified student would combine these four qualifications in the proportions of three-tenths for the first, two-tenths for the second, three-tenths for the third, and two-tenths for the fourth qualifications, so that according to my ideas if the maximum number of marks for any Scholarship were 200 they would be apportioned as follows: 60 to each of the first and third qualifications and 40 to each of the second and fourth qualifications; (2) the marks of the several qualifications would be awarded independently as follows (that is to say) the marks for the first qualification by examination, for the second and third qualification respectively by ballot by the fellow-students of the candidates, and for the fourth qualification by the head master of the candidate's school; and (3) the results of the awards (that is to say the marks obtained by each candidate for each qualification) would be sent as soon as possible for consideration to the trustees or to some person or persons appointed to receive the same and the person or persons so appointed would ascertain by averaging the marks in blocks of 20 marks each of all candidates the best ideal qualified students.

No student shall be qualified or disqualified for election to scholarship on account of his race or religious opinions. The election to scholarships shall be by the trustees after such (if any) consultation as they shall think fit with the minister having the control of education in such colony, province, state or territory.

A qualified student who has been eelcted as aforesaid shall within six calendar months after his election or as soon thereafter as he can be admitted into residence, or within such extended time as my trustees shall allow, commence residence as an undergraduate at some college in the University of Oxford.

The Scholarships shall be payable to him from the time when he shall commence such residence.

The University of Manitoba has been admitted by the University of Oxford to the privileges of the Statute on Colonial and Indian Universities.

This statute relieves students of certain standing from the requirements of Responsions, providing a sufficient knowledge of the Greek language has been shown. It also admits to Junior or Senior status, as follows:—

(a) Any member of a University so admitted, who shall have pursued a course of study prescribed by it and extending over two years, and who shall have passed all the examinations incident to the course, may be admitted to the status and privileges of a Junior Colonial or Indian Student.

(b) Any member of a University so admitted, who shall have pursued a course of study prescribed by it and extending over three full years, and who shall have taken Honours in the final examination incident to the course, may be admitted to the status and privileges of a Senior Colonial or Indian Student.

MEDALS.

(a) The Governor-General's Medals.

1. The Governor-General's *Silver and Bronze Medals*, the gift of His Excellency, the Governor-General, are awarded to the different courses in Arts at the final examination in rotation, and take the place of the University Silver and Bronze Medals in the course in which they are awerded.

In 1911, the Governor-General's Medals will be awarded in the course in Modern Languages.

(b) University Medals.

1. A *Silver Medal* shall be awarded annually to the student obtaining the highest first-class standing in each course in Arts at the final examination (in the case of the General Course fixed subjects only shall be taken into account), and to the student obtaining the highest first-class standing in the final examination in the LL.B. Course, and to the student obtaining the highest first-class standing in the final year examination in the course in Medicine.

2. A *Bronze Medal* shall be awarded annually to the student standing second in order of merit in each course in Arts at the final examination, provided his standing also be first-class, and to the student standing second in order of merit in the final examination of the LL.B. Course, provided his standing be first-class, and to the student standing second in order of merit in the Final Year Examination in the Course in Medicine, provided his standing be first-class.

3. A *Gold Medal*, presented by Dr. J. H. O'Donnell, shall be awarded annually to the student obtaining the highest first-class standing in Obstetrics and Diseases of Children in the Final Year in Medicine, provided his standing in other respects be satisfactory.

4. A *Gold Medal*, presented by Dr. J. N. Hutchison, shall be awarded annually to the student obtaining the highest first-

class standing on the aggregate marks of the full course in Medicine.

DEGREES IN ABSENTIA.

No degree will be conferred *in absentia* except when good reasons for absence have been submitted to, and approved by the Board of Studies, or the Council, and an additional fee of ten dollars will be exacted in each case where permission is granted.

GRADING OF DEGREES.

All Diplomas granted by the University are graded as follows:—*rite*, indicating standing betwen the pass mark and 67 per cent.; *cum laude*, standing between 66 per cent. and 80 per cent.; and *magna cum laude*, standing above 79 per cent.

UNIVERSITY DRESS.

No undergraduate student shall present himself at any University Examination, or at any meeting of the University, unless he be clothed in the academic dress peculiar to his college.

The materials and colors prescribed by the Council for the hoods to be worn by graduates of the University in the various Faculties, are as follows:

B.A.—Black stuff, edged with white rabbit-skin, with a braid of green silk.

M.A.—Black corded silk, lined with scarlet corded silk.

M.D.—Black cashmere, lined with purple corded silk.

M.D., C.M.—Black cashmere, lined with purple corded silk and edged with violet silk.

LL.B.—Black silk stuff, lined with white silk, edged with narrow white rabbit skin, and narrow green silk braid along the border.

B.S.A.—Black, lined with green, and edged with white rabbit skin.

Appeals.

For the re-reading of one or two papers	$ 4 00
Each additional paper	2 00

Special.

For a Certificate of Standing	$ 2 00
For a Statement of Marks	1 00
For a Complete Bound Set of Examination Papers	50
Any student, whether attending Lectures in the University Building or not, who neglects to register, each year of his course, with the Registrar of the University, within two weeks after entering College, will be liable to a fine of	2 00

Caution Money

Students in Engineering and in the special courses in Mathematics and Natural and Physical Science, and all others taking practical or laboratory classes in the University are required to deposit with the Registrar at the beginning of each session the sum of $5.00. Against this will be assessed the value of all apparatus broken or materials wasted in any way other than in the legitimate course of class work, and the balance will be refunded at the close of the term. In like manner assessments for damage done will be made by University professors and lecturers against the caution money deposits made by Medical students at the Manitoba Medical College.

DEGREES GRANTED

October 7th, 1909.

B.A.

Carmichael, James Malcolm
Dixon, Howard C.
Jackson, Jean S.
Mather, John F.
Ram, H. S.

M.D.

Green, Charles W.

B.A. Ad Eundem Gradum.

Conway, Edward, B.A., Fordham University, New York.
Kaneen, William Edward, B.A., Western University, London.

March 11th, 1910.

B.A. Ad Eundem Gradum.

Macgibbon, Duncan Charles, B.A., McMaster University, Toronto.
Riley, Harold J., B.Sc., Worcester Polytechnic Inst.

April 7th, 1910.

M.D. Ad Eundem Gradum.

Paling, Albert, M.B. (London), B.S. (London), F.R.C.S.

May 13th, 1910.

B.A.

Adamson, James Douglas
Andrews, Alfred Herbert John
Atkinson, Railton Edward

Baragar, Charles Arthur
Bastin, May
Beaubien, Joseph Thomas
Beliveau, Joseph
Bell, Morley L.
Cawley, Herbert
Charette, Guillaume Joseph
Cole, Richard
Combe, Charles Victor
Cottingham, William Randolph
Craig, John S.
Culver, Albert Fergusson
Donald, Robert Fulton Barbour
Drysdale, Gladstone Ewart
Durnin, Edward Howard
Elliott, Allan Ball
Elliott, George Henry
Ferguson, Robert George
Fillmore, John Eldon
Fulford, Albert Gilmour
Fulford, William John Dalhousie
Halldorson, Salome
Hartie, William Bowley
Heywood, Percy
Howarth, David Rusk Lowrey
Jackson, Robert Frederick
Jackson, Thorstena Sigridur
Kennedy, George Stanley
Kyle, David Cantelon
Lambert, Alexandre
Lamont, John Salmon
Lindsay, Gordon C.
Lockhart, Emanuel
Long, Elizabeth Dundas
Macdonald, Murdo
Mackinnon, Malcolm Edey
Mann, William Lawson
Middleton, Marie Nesta
McFetridge, William Alexander
McLeod, James Dudley
Moir, James Hilton
Montgomery, Kate Clare
Muckle, Anna Hollins
Neelin, Thomas Addison
Olson, Baldur

Philip, Douglas Campbell
Pybus, George Garnet
Ritchie, John Boyle
Schultz, Otto Reginald
Simonson, Elizabeth
Tait, Helen Jean
Teskey, Marquis Harold
Thomson, Frank Alexander
Thorson, Joseph Thorarinn
Warner, Albert Hurd
Warner, Edwin Lloyd
Watson, Helen Innes
Wells, George Anderson
Whiting, George A.

LL.B.

Branion, Samuel John Albert, B.A.
Bryant, John Leslie
Hamilton, Frank Kent
Hetherington, Evelyn Guy
Hugill, John William
Kennedy, Frederick Charles, B.A.
Pridham, Edwin Allee
Procter, Arthur Thomas

M.D.

Arthur, George
Peters, Wilfred Seymour
Scott, Robert George, B.A.

C.M.

Arthur, George

M.A.

Collins, Ernest Spencer, B.A., University of Manitoba, 1898. Thesis: "Are We Spoiling the Native?" An Inquiry into and Defence of the Policy of Educating the Subject Native Races of British South Africa.

Kaneen, William Edward, B.A. Western University, London. Thesis: "The Philosophy of War."
Middleton, Stephen Douglas, B.A., University of Manitoba, 1904. Thesis: "Ancient Astronomy."

B.A. Ad Eundem Gradum.

Floeck, Joseph, B.A., Kaiser Wilhelm University, Strassburg.
Price, J.A., B.A., Princeton University.
Spence, William J., B.A., University of Toronto.

STUDENTS, 1909-1910

ARTS

Fourth Year

(N.B.)—Unless otherwise specified the post office is in Manitoba).

Adamson, James Douglas .....Winnipeg.
Andrews, Alfred, Herbert John ....Winnipeg.
Atkinson, Railton Edward .....Winnipeg.
Baragar, Charles Arthur .....Elm Creek.
Bastin, May .....Winnipeg.
Beaubien, Joseph Thomas .....Winnipeg.
Beliveau, Joseph .....St. Boniface.
Bell, Morley L. .....Baldur.
Bompas, John George Gwynnett ....Wolseley, Sask.
Cawley, Herbert .....Winnipeg.
Charette, Guillaume Joseph .....La Rochelle.
Cole, Richard .....Melita.
Combe, Charles Victor .....Kent, England.
Cottingham, William Randolph .....Winnipeg.
Craig, John S. .....Fortier.
Culver, Albert Fergusson .....Winnipeg.
Donald, Robert Fulton Barbour .....Moosomin, Sask.

Drysdale, Gladstone Ewart .....Neepawa.
Durnin, Edward Howard .....Crewe, Ont.
Elliott, Allan Ball .....Winnipeg.
Elliott, George Henry .....Winnipeg.
Ferguson, Robert George .....Yorkton, Sask.
Fillmore, John Eldon .....Winnipeg.
Fulford, Albert Gilmour .....Mather.
Fulford, William John Dalhousie..Mather.
Gibson, Alexander Raeburn .....Elm Creek.
Halldorson, Salome .....Lundar.
Hartie, William Bowley .....New Westminster, B.C.
Heywood, Percy .....Winnipeg.
Howarth, David Rusk Lowrey .....Winnipeg.
Jackson, Robert Frederick .....Souris.
Jackson, Thorstena Sigridur .....Fishing Lake, Sask.
Kennedy, George Stanley .....Regina, Sask.
Kennedy, Harvey Everest .....Winnipeg.
Kyle, David Cantelon..... Brandon.
Lambert, Alexandre D. .....St. Boniface.
Lamont, John Salmon .....Charlottetown, P.E.I.
Lindsay, Gordon C. .....Winnipeg.
Lockhart, Emanuel .....Spring Valley, P.E.I.
Long, Elizabeth Dundas .....Winnipeg.
Macdonald, Murdo .....Winnipeg.
McFetridge, William Alexander ....Souris.
MacKinnon, Malcolm Edey .....Portage la Prairie.
McLeod, James Dudley.....Winnipeg.
Mann, William Lawson .....Macklin, Sask.
Middleton, Marie Nesta .....Brandon.
Moir, James Hilton .....Winnipeg.
Monette, Joseph Antonin .....Lac Pelletier, Sask.
Montgomery, Kate Clare .....Winnipeg.
Muckle, Anna Hollins .....Clandeboye.
Murray, William Anderson .....Stonewall.
Neelin, Thomas Addison .....Munster, Ont.
Olson, Baldur .....Winnipeg.
Philip, Douglas Campbell .....Winnipeg.
Pybus, George Garnet .....Winnipeg.
Ritchie, John Boyle .....Port Arthur, Ont.
Schultz, Otto Reginald .....Baldur.
Simonson, Elizabeth .....Wetaskiwin, Alta.
Tait, Helen Jean .....Winnipeg.
Teskey, Marquis Harold .....Winnipeg.
Thomson, Frank Alexander .....Brandon.
Thorson, Joseph Thorarinn .....Winnipeg.

Warner, Albert Hurd ..... Winnipeg.
Warner, Edwin Lloyd ..... Winnipeg.
Watson, Helen Innes ..... Winnipeg.
Wells, George Anderson ..... Winnipeg.
Whiting, George A. .... Moosomin, Sask.

Third Year

Adamson, Alan C. ..... Winnipeg.
Anderson, James Thomas Milton.... Grenfell, Sask.
Argue, Robert Fletcher ..... Shillsville, Ont.
Berry, Lester Edward ..... England.
Bertrand, Jacques ..... St. Boniface.
Bjarnason, Stefan August ..... Mary Hill, Sask.
Beaupré, Jean Baptiste ..... St. Boniface.
Béliveau, Arthur ..... Winnipeg.
Brandon, Isabel Albina ..... Brandon.
Bury, George Aylen Ernest ..... Winnipeg.
Cameron, Charles Frederick ..... Carlyle, Sask.
Campbell, John Fletcher ..... Louise Bridge.
Carrick, Cecil Lorne ..... Brandon.
Chambers, Samuel David ..... Winnipeg.
Clyde, John Baxter ..... Winnipeg.
Denby, Ella ..... Winnipeg.
Dixson, Percy John ..... Winnipeg.
Doidge, Walter Alexander ..... Winnipeg.
Donnelly, Henry Bingham ..... Norwood.
Dutton, John Brockway ..... Sintaluta, Sask.
Eliott, Albert Leslie ..... Maymont, Sask.
Evans, Albert Ethelbert Aylward.... Winnipeg.
Fahrni, Roy ..... Gladstone.
Fox, Vera Margarita ..... Winnipeg.
Gardiner, James Garfield ..... Clearwater.
Howey, John Victor ..... Moisse, Ont.
Johannsson, Johann Gertur ..... Poplar Park.
Johnson, Baldur ..... Mimir, Sask.
Kerr, Stanley Harold ..... Franklin.
Lamont, Joseph Laurie ..... Treherne.
Lawson, Clarkson Brunskill ..... Brandon.
Lukacs, Joseph ..... Esterhazy, Sask.
McManus, Joseph Lewis ..... Winnipeg.
Major, Fernand B. ..... Hull, Que.
Leslie, Eva May ..... Winnipeg.
Lindal, Walter .... Holar, Sask.
McBride, Andrew .... Winnipeg.

McCool, Charles Wesley ..... Burriss, Ont.
McFarlane, Margaret Ethel ..... Winnipeg.
McGill, Sydney ..... Neepawa.
McIntyre, Neil Albert ..... Winnipeg.
McIntyre, Gladys Isabella ..... Winnipeg.
McKnight, Almyra ..... Winnipeg.
McLenaghen, Myrtle V. ..... Portage la Prairie.
McQueen, Robert ..... Brandon.
Magowan, Robert ..... Drumbo, Ireland.
Matheson, Edgar Hugh Ernest ..... Winnipeg.
Matheson, Norah Evelyn ..... Winnipeg.
Miller, Charles Samuel ..... Winnipeg.
Morgan, William Henry ..... Winnipeg.
Morrison, Wesley ..... Grenfell, Sask.
Mulligan, William Orr ..... Winnipeg.
Neville, Allen E. ..... Goodlands.
Noble, William Maurice ..... Glenboro.
Palmer, John Francis ..... Oak River.
Patterson, Douglas Richard ..... Toronto, Ont.
Paul, Morley Perry ..... Govan, Sask.
Rutherford, Gerald Stuart ..... Winnipeg.
Shearer, William Charles ..... Neepawa.
Sibley, John Cynddylan ..... Winnipeg.
Siddall, Eldon Rooklidge ..... Winnipeg.
Singleton, Wilfred Burnett ..... Winnipeg.
Sissons, Melrose ..... Portage la Prairie.
Strang, John Argyle ..... Virden.
Thompson, Jean Hathaway ..... Winnipeg.
Ward, Gladys Irene ..... Winnipeg.
Webster, Margaret ..... Portage la Prairie.
Wilkins, James ..... West London, Ont.

Second Year

Abbott, William Frederick ..... Winnipeg.
Abrahamson, Simon ..... Winnipeg.
Adams, Irene Sutcliffe ..... Winnipeg.
Adamson, Morris Clayland ..... Carman.
Agar, Georgina ..... Brandon.
Andrew, Mary Agnes ..... Winnipeg.
Baird, Andrew Stuart ..... Winnipeg.
Beauchamp, Christine Margaret ..... South Qu'Appelle, Sask.
Bell, Elizabeth ..... MacGregor.
Bell, Ezra D. ..... Baldur.
Bloomer, Edith Mary ..... Basswood.

Bohémier, Charles Adolphe .....Saint Norbert.
Boyle, Russell Ernest .....Togo, Sask.
Broad, Lloyd .....Winnipeg.
Brownlee, Thomas Irwin .....High View, Sask.
Bulloch, Margaret Adeline .....Reston.
Buchanan, Margaret Ruth .....Winnipeg.
Briggs, Mary A. .....Winnipeg.
Bushe, William Feltrim .....Winnipeg.
Cairns, Amaret .....Poplar Grove, Sask.
Caldwell, Charles Fleming .....Dauphin.
Cameron, Catherine Jane .....Shoal Lake.
Campbell, William Alexander .....Winnipeg.
Campbell, William Russell .....Winnipeg.
Caswell, Walter Buchanan .....Saskatoon, Sask.
Chapman, Frederick Colbourne.....Winnipeg.
Clarke, Ernest H. .....Borden, Sask.
Copeland, Charles Edgar .....Winnipeg.
Coxworth, Morley .....Dauphin.
D'Arcy, Norman Joyce .....Winnipeg.
Dempsey, James Wesley .....Kerfoot.
Désorcy, Emile .....Lorette.
Dolmage, Victor .....Souris.
Dorey, George .....Winnipeg.
Everall, Earle Stuart .....Portage la Prairie.
Eaton, Harris .....Winnipeg.
Ewert, Alfred .....Gretna.
Ferrier, Russell Thompson .....Brandon.
Gauthier, Charles Henri .....Ste. Agathe.
Gauthier, Conrad .....Ste. Agathe.
Gill, Clifford Bickell .....Pettapiece.
Gillespie, Alma L. .....Winnipeg.
Graham, Alma .....Winnipeg.
Grain, Gerald Orton .....Selkirk.
Green, Eva May .....Kenora, Ont.
Haney, Clifford Ivan .....Winnipeg.
Hjalmarson, Bjorn .....Glenboro.
Hopper, Clark Reid .....Newdale.
Jenkins, Llewellyn Arthur .....Winnipeg.
Johnson, Hallgrimur .....Winnipeg.
Jonasson, Jonas Th. .....Mimir, Sask.
Kane, Paul .....Rathwell.
Kelly, Mildred Helen .....Winnipeg.
Kerr, John Lindsay .....Franklin.
Kilfoyl, Roland Howard .....MacGregor.
Landry, Joseph Napoleon .....St. Norbert.

Laurin, Alphonse ..... Dufresne.
Leech, Vera ..... Brandon.
Little, Grace Elvie ..... Brandon.
Logan, Harold Thomas ..... Peachland, B.C.
Lougheed, Morley Simmons ..... Cypress River.
McCaw, Mina Pearl ..... Winnipeg.
McKenzie, Roderick Duncan ..... Winnipeg.
Middal, Ethel Lara ..... Winnipeg.
Milliken, Robert Handyside ..... Reston.
Milroy, Reginald Charles ..... Winnipeg.
Moore, Etta M. ..... Brandon.
Munroe, Ina ..... Kildonan East.
Murdoch, Sophie May ..... Winnipeg.
Naismith, William ..... Condie, Sask.
Nason, William ..... Winnipeg.
Norton, Glen Reginald ..... Winnipeg.
Orr, Marian Evelyn ..... Winnipeg.
Paterson, Donald Hugh ..... Winnipeg.
Paulson, Gordon Alexander ..... Winnipeg.
Pearson, Evelyn Mowbray ..... Winnipeg.
Pearson, Harold John Cory ..... Winnipeg.
Potter, Samuel Howard ..... Brandon.
Richardson, Blaine ..... Winnipeg.
Roblin, Charles Dufferin ..... Winnipeg.
Savage, James ..... Esterhazy, Sask.
Shinbane, Abbie Mark ..... Winnipeg.
Simpson, Fred Irwin ..... Virden.
Surtees, Benjamin ..... Winnipeg.
Thomson, Lily Gordon ..... Winnipeg.
Warkentin, Isaac J. ..... Winkler.
Weir, Laura Adelaide ..... Winnipeg.
Wilton, Winnifred Marie ..... Winnipeg.
Winkler, Howard Waldemar ..... Morden.

First Year

Agar, Annie Jane ..... Brandon.
Anderson, Olafur Thordur ..... Selkirk.
Arnason, Jon ..... Winnipeg.
Austmann, Kristjan Jansson ..... Woodside.
Ball, Fred Blatchford ..... Winnipeg.
Beaupré, Joseph Marcien ..... St. Boniface.
Bell, Albert Aylmer ..... Baldur.
Bell, Gerald Sylvester ..... Winnipeg.
Bergmann, Magnea G. ..... Winnipeg.

Bjornson, Sveinn Eriksson ..... Winnipeg.
Black, George Patton ..... Winnipeg.
Bleau, Marius ..... St. Boniface.
Bonneau, S. Marcien ..... St. Vital.
Bowmann, Harry Isaac ..... Winnipeg.
Bridgman, Bidwell Wesley ..... Portage la Prairie.
Burns, Charles William ..... Winnipeg.
Bryan, Owen ..... Oak Lake.
Campbell, Harold Reid ..... Carman.
Campbell, Neil Stanley ..... Winnipeg.
Chapman, Arthur Armstrong ..... Forget, Sask.
Clark, Mary Gordon ..... Toronto, Ont.
Cleave, William Thomas ..... Winnipeg.
Clendenan, Mary Marguerite ..... Winnipeg.
Colcleugh, William Henry ..... Riverview, Ont.
Collins, Emmett F. ..... St. Boniface.
Constable, Thomas C. ..... Sandridge.
Coubrough, Robina Frances ..... Stonewall.
Crookshanks, Olive Evelyn ..... Grand View.
Crummy, Richard ..... Winnipeg.
Crummy, William T. ..... Winnipeg.
Cunningham, Olive Isabel ..... Winnipeg.
Douglas, Norman Brent ..... Makinak.
Ducker, Stella May ..... Winnipeg.
Dunfield, Eber Atkin ..... Winnipeg.
English, Harry Oswald ..... Harding.
Erikson, John ..... Winnipeg.
Florence, George ..... Roden.
Forest, Valmore O. ..... Paynton, Sask.
Frith, Lawrence Edward Cokayne.. Winnipeg.
Garrow, William Murison ..... Winnipeg.
Garton, Maris Henry ..... Winnipeg.
Gelly, George Maurice ..... Winnipeg.
German, Lionel Vaughan ..... Winnipeg.
Gordon, Archie ..... Brandon.
Graham, Eleanor Dell ..... Roland.
Gunn, Constance ..... Stonewall.
Gunn, Evelyn ..... Stonewall.
Hansford, Blossom ..... Winnipeg.
Haney, Gladys ..... Winnipeg.
Harris, Tom Hare ..... Brandon.
Harvey, Fern Mildred ..... Winnipeg.
Harvey, Robert ..... Brandon.
Henderson, Richard Carl ..... Winnipeg.
Hoodspith, Harry Robert ..... Winnipeg.

Irvine, Charles Henry ..... Winnipeg.
Irvine, Wesley William ..... Alameda, Sask.
Johannson, A. L. ..... Winnipeg.
Johnston, Lillian Stewart ..... Winnipeg.
Johnson, Thomas William ..... Winnipeg.
Kerley, Henry Horace ..... Winnipeg.
Killam, George Thomas ..... Mt. Middleton, N.B.
Kristjansson, Matthildur ..... Tantallon, Sask.
Leach, Harold Melville ..... Winnipeg.
Letham, Walter Gibb ..... Minnedosa.
Leighton, Edmund Herbert ..... Winnipeg.
Lipsett, Florence Queenie ..... Winnipeg.
Loft, Arthur ..... Winnipeg.
Logan, Lois Ada ..... Lauder.
Long, William ..... Winnipeg.
McCamis, Muriel Vivian ..... Arden.
McEown, Lawrence Lewers ..... Souris.
McFadden, Hamilton Lauders ..... Brandon.
McKay, Archie A. S. ..... Portage la Prairie.
McKay, Joseph Fortescue ..... Prince Albert, Sask.
McKeague, Minnie Moote ..... Winnipeg.
McKee, William Carey ..... Brandon.
McKillop, John ..... Winnipeg.
McKinnon, Fraser Reid ..... Brandon.
McLachlan, Lizzie MacKay ..... Disley, Sask.
McLaughlin, Marguerite Edith ..... Winnipeg.
McPherson, Marguerite Hermione.. Winnipeg.
McKeigue, Gerald Patrick Alex..... Port Arthur, Ont.
Margerie, Antoine de ..... Sainte Anne des Chenes
Maxwell, Jessie W. ..... Cordova.
Meagher, Charles ..... Winnipeg.
Milner, William Herbert ..... Winnipeg.
Mitchell, Elinor M. ..... Winnipeg.
Moffatt, Edward K. ..... Winnipeg.
Mountford, Wilfred ..... Winnipeg.
Munroe, Marjorie ..... Kildonan.
Munroe, Robert Nelson ..... Winnipeg.
Murphy, Thomas ..... Brandon.
Murray, George Wishart ..... Slager, Sask.
Orr, Nina Janet ..... Winnipeg.
Paquin, Pierre ..... St. Boniface.
Parker, George Williamson ..... Winnipeg.
Parsons, Chester ..... Fortier.
Paulson, Margaret ..... Winnipeg.
Philip, Mary B. ..... Winnipeg.

Phillips, John Elbert ..... Wilhelm, Sask.
Popham, Earle C. ..... Winnipeg.
Prud'homme, Alexandre Arthur..... St. Boniface.
Purdon, Jessie May ..... Winnipeg.
Raymer, Alice Rosa ..... Selkirk.
Reardon, Leo Francis ..... St. Boniface.
Reid, May Gertrude ..... Selkirk.
Rhodenizer, Vernon Blaine ..... Winnipeg.
Robinson, James ..... Brandon.
Rose, Nettie ..... Brandon.
Seale, Percy Fred ..... Winnipeg.
Simpson, Evelyn J. ..... Brandon.
Smith, Beatrice ..... Brandon.
Speers, L. Willhelmina ..... Brandon.
Speers, Russell West ..... Brandon.
Speirs, Mable Mildred ..... Winnipeg.
Stefanson, Steinun Jonasina ..... Gimli.
Strang, Margaret Helen ..... Virden.
Styles, Alfred Gavilla ..... Winnipeg.
Thomson, John Wilfred ..... Grenfell, Sask.
Thomson, Robert ..... Roden.
Thorsteinsson, Gudmundur Olafur. Stony Hill.
Thorvilson, Arthur W. ..... Winnipeg.
Turner, Ada Hester ..... Beausejour.
Underwood, Percy William ..... Calgary, Alta.
Waind, Edna Blanche ..... Arcola, Sask.
Wark, Harold ..... Winnipeg.
Watson, William Douglas ..... Winnipeg.
Weir, Albert Jackson ..... Valley River.
Wilkin, William Ezra ..... Arcola, Sask.
Williams, Francis Albert ..... Winnipeg.
Wilson, Graham ..... Winnipeg.
Wilson, Petrina ..... St. James.
Wurster, Oscar A. ..... Winnipeg.
Young, John Alexander ..... Griswold.
Yule, Robert Foreman ..... Killarney.
Zerebko, Orest ..... Winnipeg.
Zink, Vera Clare ..... Brandon.

ENGINEERING

Fourth Year

Stout, Clifford Vier ..... Springfield.
Taylor, William Caven ..... Winnipeg.

Third Year

Cavanagh, Albert Lee ..... Winnipeg.
Dynes, William Warren ..... Winnipeg.
Easton, Roy ..... Winnipeg.
Karlan, Sam. George ..... Winnipeg.
Landon, Charles Sydney ..... Winnipeg.
Lothian, Robert Ingles ..... Pipestone.
O'Reilly, J. Arthur Hamilton ..... Selkirk.
Rimmington, Harry Stanley ..... Winnipeg.
Saltzman, Herman ..... Winnipeg.
Croll, Victor Theodore ..... Winnipeg.
MacCallum, Duncan ..... Mundare, Alta.

Second Year

Bell, James ..... Winnipeg.
Boynton, Vern Knox ..... Winnipeg.
Cruickshanks, Raymond ..... Winnipeg.
Davis, Wilfrid Ross ..... Winnipeg.
Easton, Leonard ..... Winnipeg.
Fingland, William Chisholm ..... Winnipeg.
Hunt, William Harold ..... Winnipeg.
Irvine, Joseph H. ..... Winnipeg.
Mitchell, Caulson Norman ..... Winnipeg.
O'Reilly, Richard Hamilton ..... Selkirk.
Shank, Gordon Lane ..... Winnipeg.
Taunton, Arthur John ..... Winnipeg.

First Year

Aird, John ..... Winnipeg.
Auger, Albert ..... St. Boniface.
Bellhouse, R. Wynyard Stacpoole ..... Winnipeg.
Berinstein, Joshua ..... Winnipeg.
Betournay, Louis ..... St. Boniface.
Collins, William Scott ..... Miami.
Collins, Bower Scott ..... Miami.
Earle, Fred. Graham ..... Brandon.
Forbes, James Fraser Neville ..... Prince Albert, Sask.
Johnston, Bruce Alexander ..... Deloraine.
Johnston, Harold Leslie ..... Winnipeg.
Jones, William Henry ..... Kildonan.
Knox, William Douglas ..... Minneapolis, Minn.
Leslie, James Frank ..... Winnipeg.

McKinnon, Hugh William ..... Winnipeg.
McPherson, David Ewan ..... Winnipeg.
Morris, Harold Irwin ..... Winnipeg.
Munro, James Calder ..... Miami.
Pulford, Fred Meikle ..... Winnipeg.
Ruttan, John Douglas ..... Winnipeg.
Sandison, William Ross ..... Winnipeg.
Sharman, William W. ..... Winnipeg.
Sharpe, Clarence Bogardus ..... Listowel, Ont.
Stewart, George Lawrence ..... Winnipeg.
Tait, Victor Huber ..... Winnipeg.
Urie, Harry Roy ..... Deloraine.
Wallace, William Sherriff ..... Fort William, Ont.
Wickson, John A. ..... Winnipeg.

MEDICINE

Fourth Year—(Old Course)

Lambert, C. August ..... St. Boniface.
Lee, John Howard ..... Winnipeg.
McGregor, Bruce ..... Carberry.
Peters, Wilfred Seymour ..... Wawanesa.
Scott, Robert George ..... Wakaw, Sask.

Fourth Year—(Five Year Course)

Armstrong, George Perry ..... Carman.
Atkinson, Wilfred L. ..... Gladstone.
Breidenbach, Lambert ..... Winnipeg.
Bryant, Frank Millwood ..... Shellmouth.
Clare, Charles Morley ..... Tweed, Ont.
Elliott, William James ..... Bluevale, Ont.
Fahrni, Gordon Samuel ..... Gladstone.
Fraser, John Brereton ..... Franklin.
George, James Polson ..... Morden.
Little, Edwin L. ..... Pilot Mound.
McIntyre, Dougald ..... Winnipeg.
McKenty, Donald Edmund ..... Winnipeg.
Martin, John Roy ..... Newdale.
Miller, Thomas ..... Alder Grove, B.C.
Mooney, George William ..... Lacombe, Alta.
Richardson, James Graham ..... Manor, Sask.

Rose, Stuart M. .....Minnedosa.
Stefansson, Jon .....Winnipeg.
Story, Herbert Edward Angele.....Lenore.

Third Year

Banting, Charles Orby .....Wawanesa.
Bedford, George Victor .....Winnipeg.
Bunn, Charles Randolph R. .....Winnipeg.
Campbell, William Ewert .....Winnipeg.
Jackson, Frederick William .....Stonewall.
Jamieson, Fred Lawrence .....Winnipeg.
Kerster, John Kennedy .....Kenton.
McConnell, Louie Hansel .....Hamiota.
McKinnon, Frank Lorne .....Winnipeg.
Moran, John E. .....Winnipeg.
Murison, James Alois .....Winnipeg.
Sharman, William James .....Winnipeg.
Shaw, Edward Albert .....Minto.
Sproule, Abner .....Richard, Sask.
Stephanson, S. .....Selkirk.
Strong, Caudren Maurice .....Medicine Hat, Alta.
Talbot, Albert Edward .....Calgary, Alta.
Thompsett, David Alexander .....Goodlands.
Wallace, Douglas .....Niverville.
Warner, Norman Wilfred .....Winnipeg.

Second Year

Alford, Andrew Alfred .....Oak Lake.
Bates, William John .....Winnipeg.
Bird, Frederick Valentine .....Dunara.
Blondal, August .....Winnipeg.
Cameron, Lyle John .....Shoal Lake.
Carr, William Mattison .....Winnipeg.
Chestnut, William A. .....Winnipeg.
Cole, William .....Melita.
Creighton, Douglas St. Clare.....Saskatoon, Sask.
Dunham, Franklin Fletcher .....Portage la Prairie.
Ferg, Edwin James .....Arden.
Floyd, Frank H. .....Ft. Francis, Ont.
Fryer, Irwin Offere .....Winnipeg.
Groulx, Donald Luther .....Reston.
Gunn, Livingston Gilbert .....Kenora, Ont.
Heddesheimer, Philip William C.... Isabella.

Kiteley, John Edgar .....Tugaske, Sask.
Mathers, Alvin Trotter .....Neepawa.
Monro, Campbell Hamilton .....Ethelbert.
Murray, Angus Allan .....Winnipeg.
Ross, Edith Mackay .....Winnipeg.
Stewart, Aubon Earle .....Winnipeg.
Stewart, Floyd Cecil .....Neepawa.
Taylor, Benjamin .....Headingly.
Waite, James .....Oak Lake.
Williams, Gerald Shaw .....Winnipeg.

First Year

Arthur, Chas. Lennox Tulloch.....London, England.
Bell, Harry Chandler C. .....Virden.
Blight, Clayton Lee .....Brandon.
Boughton, Harvey Crawford .....Arden.
Bromley, James Lloyd .....Winnipeg.
Brown, Robert Henry .....Morden.
Buchanan, James Harvey .....Winnipeg.
Burrows, Frederick Lindsay .....Swan Lake.
Cairns, James William .....Chesley, Ont.
Cassidy, Dimock Stanley .....Frobisher, Sask.
Christilaw, John Albert .....Keyes.
Clarke, John Lester .....Edmonton, Alta.
Collins, Ralph Burritt .....Harrowby.
Cropp, James Lorne .....Gerald, Sask.
Décosse, Phoenix .....Somerset.
Gillespie, Alexander Johnston.....Regina, Sask.
Holmes, Samuel E. .....Crystal City.
Johnston, Clarence Woods .....Morden.
McClelland, Charles Victor .....Letellier.
McClelland, James Clarence .....Winnipeg.
McIntyre, William Hubert .....Winnipeg.
McKenzie, Hector Charles .....Winnipeg.
McTavish, George Boyd .....Plum Coulee.
Menzies, Adam Fisher .....Winnipeg.
Morley, Harvey Wilkin .....Dauphin.
Nicholson, John Robt. Warburton..Dauphin.
Onhauser, Vincent F. .....Winnipeg.
Picard, Joseph .....Winnipeg.
Prendergast, James .....St. Boniface.
Rollins, Nelles .....Killarney.
Stewart, John Howard .....Winnipeg.
Stewart, Neil Roy .....Weyburn, Sask.

Treleaven, George Willard ....Killarney.
Trimble, Noble Garfield .....Winnipeg.
Whitemarsh, Harland Chester .....Winnipeg.
Wood, John Ferrell .....Miami.

CANDIDATES FOR LICENSE

Bearman, George Purvis, M.D.....Ottawa, Ont.
Benoit, Leon, M.D. .....Winnipeg.
Bracken, Edwin James, M.D.....Reston.
Hammond, James Felton, M.D.....Ironside, P.Q.
Healy, James Joseph, M.D. .....Toronto, Ont.
Hurst, Reuben L., M.D. .....Lake Superior Jct., Ont.
Munroe, Frederick Dennis, M.D.....Welwyn, Sask.
Panton, Leon, A. Cattanach, M.D..Kenora, Ont.
Pilcher, John Wesley, M.D..... .....Westbourne.
Rennie, William Henry, M.D.....Portage la Prairie.
Saucier, Jos. Tancride Oscar, M.D..Fannystelle.
Soley, Lawson Armstrong, M.D.....Neche, N. Dakota.
Young, David McM., M.D.....Bristol, Que.

LAW

Third Year

Branion, Samuel John Albert ..... Wolseley, Sask.
Bryant, John Leslie .....Moose Jaw, Sask.
Hamilton, Frank Kent .....Winnipeg.
Hetherington, Evelyn Guy .....Souris.
Hugill, John William .....Calgary, Alta.
Kennedy, Frederick Charles .....Winnipeg.
Pridham, Edwin Allee .....Winnipeg.
Procter, Arthur Thomas.....Winnipeg.

Second Year

Cumming, William Purday .....Regina, Sask.
Dysart, Geo. Augustus Harrison...Winnipeg.
George, John Milton ....Deloraine.
Guild, William Forbes ....Kemnay.
Honeyman, Egbert Douglas .. .. .Winnipeg.
Hoskins, Ronald .....Manitou.

Kilbourne, Robert Bruce .....Winnipeg.
McMillan, Norman A. .....Margaret.
Masterman, Lawrence Arthur .....Winnipeg.
Mather, John Alexander .....Deloraine.
Procter, Percy John .....Oswald.
Tingley, George Russell .....Austin.
Skene, Stanley Donald .....Calgary, Alta.
Wallar, John Franklin .....Winnipeg.

First Year

Gerrand, Ernest Walter .....Virden.
Gyles, Henry Foliott .....Winnipeg.
Haig, Gordon Stuart .....Alexander.
Hancock, John .....Neepawa.
Hetherington, Frank Martin .....Winnipeg.
Hooge, Peter J. .....Swift Current, Sask.
MacMillan, Allan O'Neill .....Neepawa.
McVicar, John Archibald .....Winnipeg.
Mills, Edward Robert Rufus .....Winnipeg.
Morrison, John W. .....Winnipeg.
Scott, Clarence Simpson .....Winnipeg.
Sypher, James Roy .....Morden.
Thompson, Frederick George .....Morden.
Trotter, Austin Stanley .....Regina, Sask.
Wyness, Harvey Phin ..... Swan Lake.

AGRICULTURE

Fourth Year

Crawford, Frederick Walter .....Chater.
Harrison, Thomas James .....Graysville.
Jones, Edgar Ward .....Carman.
McMillan, Archibald John .....Greenbank, Ont.
Noble, John Carmichael .....Brandon.
Partridge, Charles Grover .....Sintaluta, Sask.
Smith, John Cochrane .....Inverness, Scotland.
Thompson, Harry Nelson .....Sourisford.
Thomson, William Walter .....Carberry.
Tinline, Milton John .....Elkhorn

Third Year

Blackstock, Adna Lewis ..... Ovenstown, Sask.
Evans, James Howell ..... Lenore.
Milne, Robert ..... Mekiwin.
Qually, Arvil Edwin ..... Dacotah.
Shanks, Graham Lawson ..... Pettapiece.
Walker, Harry Ewart ..... Winnipeg.
Weston, Joseph Read ..... Leicester, England.
Whiteman, Robert ..... Russell.

SPECIAL STUDENTS

Clark, Alfred George ..... Austin.
Dyker, George Anderson ..... Winnipeg.
Fillmore, Charles Elwyn ..... Winnipeg.
Halliwell, Fred. ..... Winnipeg.
Lowry, Robert Hamilton ..... Keyes.
Marshall, Tom ..... Winnipeg.
Mills, Loreley ..... Winnipeg.
Park, Robert Elphinstone ..... Winnipeg.
Renwick, George ..... Winnipeg.
Sweetnam, W. ..... Winnipeg.
Tait, William McDougall ..... Arnprior, Ont.
Whillams, James ..... Winnipeg.

EXTENSION COURSE—POLITICAL ECONOMY.

Anderson, Thomas ..... Winnipeg.
Fretwell, E. ..... Winnipeg.
Holmberg, P. W. ..... Winnipeg.
Jones, David B. ..... Winnipeg.
Kenway, D. J. ..... Winnipeg.
Morris, Charles ..... Winnipeg.
Monnin, A. L. ..... Winnipeg.
Scott, R. L. ..... Winnipeg.
Sirett, E. T. ..... Winnipeg.
Thomas, A. V. ..... Winnipeg.
Urquhart, C. ..... Winnipeg.
White, G. C. ..... Winnipeg.
Wolverton, C. L. ..... Winnipeg.

EXTENSION COURSE—ENGLISH

Addison, Gertrude M. ..... Winnipeg.
Agnes, Sister Mary ..... Winnipeg.
Baxter, Margaret R. ..... Winnipeg.
Beckett, John W. ..... Winnipeg.
Bernhart, Alma ..... Winnipeg.
Brandon, Lizzie A. ..... Winnipeg.
Boileau, G. C. ..... Winnipeg.
Bowman, David ..... Winnipeg.
Bromley, Hattie ..... Winnipeg.
Burch, Mrs. Elizabeth ..... Winnipeg.
Bull, Lillian B. ..... Winnipeg.
Chapman, Leona R. ..... Winnipeg.
Clark, Birdena M. ..... Winnipeg.
Corbet, Marjorie ..... Winnipeg.
Cornell, Anna C. ..... Winnipeg.
Day, M. Edith ..... Winnipeg.
Dickie, Margaret ..... Winnipeg.
Doyle, Francis F. ..... Winnipeg.
Doyle, Birdie ..... Winnipeg.
Eileen, Sister Mary ..... Winnipeg.
Fielding, Edith M. ..... Winnipeg.
Gall, Marjorie ..... Winnipeg.
Gilbert, Sister Mary ..... Winnipeg.
Glenn, Amber L. ..... Winnipeg.
Gordon, Miss A. R. ..... Winnipeg.
Greenway, C. M. ..... Winnipeg.
Groff, Addie H. ..... Winnipeg.
Groff, Clare L. ..... Winnipeg.
Haig, Isabel T. ..... Winnipeg.
Haig, Kennethe ..... Winnipeg.
Haliday, M. H. ..... Winnipeg.
Hall, Ethel M. ..... Winnipeg.
Harper, F. E. ..... Winnipeg.
Hugg, J. B. ..... Winnipeg.
Judith, Sister Mary ..... Winnipeg.
Laidlaw, Chas. W. ..... Winnipeg.
Little, Laura P. ..... Winnipeg.
Milne, Annie S. ..... Winnipeg.
Milne, Clara J. ..... Winnipeg.
Moir, Mary E. ..... Winnipeg.
MacArthur, P. I. ..... Winnipeg.
Macdonald, Colina ..... Winnipeg.
Macdougall, Marion ..... Winnipeg.

McKnight, Lela H. ..... Winnipeg.
McManus, Mary L. ..... Winnipeg.
Page, Mary L. ..... Winnipeg.
Parsons, Ellen ..... Winnipeg.
Paterson, Jean ..... Winnipeg.
Robertson, Isabel ..... Winnipeg.
Robson, Jean I. ..... Winnipeg.
Rodgers, Rebecca ..... Winnipeg.
Sanders, Edith V. ..... Winnipeg.
Simpson, Gertrude ..... Winnipeg.
Sproule, G. A. ..... Winnipeg.
Thompson, Effie ..... Winnipeg.
Wright, Edith M. ..... Winnipeg.
Yuill, Carrie M. ..... Winnipeg.

SUMMARY

Number of	Arts Students	361
"	Engineering Students	53
"	Medical Students	119
"	Law Students	37
"	Students in Agriculture	18
"	Special Students	12
"	Extension Course Students	70
	Total	670